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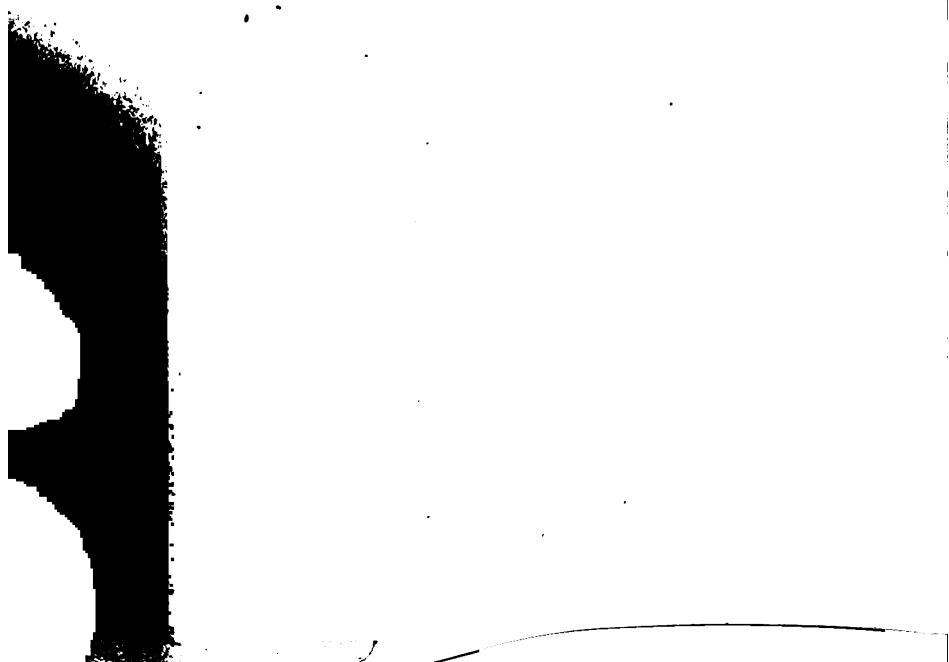
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**STAMMERING AND COGNATE  
DEFECTS OF SPEECH**



# STAMMERING AND COGNATE DEFECTS OF SPEECH

BY

C. S. BLUEMEL

VOLUME II

CONTEMPORANEOUS SYSTEMS OF TREATING STAMMERING:  
THEIR POSSIBILITIES AND LIMITATIONS

NEW YORK

G. E. STECHERT AND COMPANY

LONDON — LEIPZIG — PARIS

1913  
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Notched Press  
J. S. Cushing Co. — Berwick & Smith Co.  
Norwood, Mass., U.S.A.

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## TABLE OF CONTENTS

CHAPTER I	
INTRODUCTION . . . . .	PAGE I
CHAPTER II	
RESPIRATION . . . . .	4
CHAPTER III	
VOCALIZATION AND VOWEL-PRODUCTION . . . . .	29
CHAPTER IV	
ARTICULATION . . . . .	57
CHAPTER V	
VERBAL EXERCISES, MODES OF ENUNCIATION, ETC. . . . .	96
CHAPTER VI	
MECHANICAL APPLIANCES, ETC. . . . .	216
CHAPTER VII	
PSYCHOLOGICAL METHODS . . . . .	225
CHAPTER VIII	
"STAMMERING-SCHOOLS" AND "SPEECH SPECIALISTS" . . . . .	255

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# CONTEMPORANEOUS SYSTEMS OF TREATING STAMMER- ING: THEIR POSSIBILITIES AND LIMITATIONS

## CHAPTER I

### INTRODUCTION

IN this volume the writer endeavors to present a synoptical review of the various systems employed in Europe and America in treating stammering. In the main, the systems described will be those contemporaneously employed; but inasmuch as many of the old and obsolescent systems are periodically re-quickened, and vaunted before the world as new and infallible discoveries, it will be necessary to describe briefly a few methods that one would willingly account defunct.

It would be a little impractical and often somewhat uncomplaisant to take up the systems of various "stammering-schools" as entities, and discuss and comment on the collection of unit expedients and exercises of which each system is composed. The more practical procedure will be to describe the units



## 2      SYSTEMS OF TREATING STAMMERING

without necessary reference to the systems in which they occur.<sup>1</sup> This will eliminate useless and endless repetition, and obviate propinquities of print that might often suggest personal criticism. An individual system is usually an arbitrary and adventitious thing: it is commonly a collection of exercises and resources whose assemblage is due to the chance associations of the person plying it; or it is a collection of exercises and expedients designed to remedy conditions that the person regards as the cause of the evil he is endeavoring to combat. But in either case the coalescence of different measures in a system is usually without great significance.

In presenting theories and opinions and describing various "remedial" measures, the writer will where feasible quote from works on stammering in order to avoid any possible suggestion of misinterpretation. Owing to the nature of the commentary, the source of the passages will in many cases not be given. All works, however, from which passages are excerpted are to be found in the Bibliography.<sup>2</sup> The writers quoted will not always be contemporaneous, but the passages cited will have reference to theories and expedients at present accredited or countenanced in the therapy of stammering.

<sup>1</sup> For illustration, a number of complete systems are given in the latter part of the book.

<sup>2</sup> Appended to Vol. II.

Stammering is commonly viewed as a physiological defect, and its cause thought to lie in some anomaly of respiration, vocalization, or articulation. For this reason, most systems of treatment consist of exercises and expedients that are presumed to give one control of the refractory organs or to regulate in some way the aberrant function concerned. In other systems — which are in the minority — this analytical procedure is not observed; but speech is regarded as a unitary function, and its defects treated by some more or less arbitrary method. It is evident that the systems of these two classes have little in common, and that the measures to be discussed will conform to no absolute classification. The procedure in the succeeding chapters will therefore be largely one of convenience.

We begin with a discussion of the various exercises, etc. that are designed to remedy defects of respiration.

## CHAPTER II

### RESPIRATION

NUMEROUS persons engaged in treating speech-defects hold the view that the primary cause of stammering is faulty respiration:

“Respiratory disturbances are found in all stammerers.”<sup>1</sup>

“There is scarcely a stammerer who knows how to breathe correctly.”<sup>2</sup>

“This difficulty is always accompanied by a disturbance or vicious application of the rhythm of respiration during speech.”<sup>3</sup>

“The muscles of respiration are almost as much at fault in stammering as the organs of sound and articulation.”<sup>4</sup>

The respiratory disturbances are often attributed to weak nerves or muscular spasms; and the disturbances in breathing are frequently regarded as the direct cause of the “failure of the voice”:

“But the immediate cause, and the nature of the defect itself, is a spasm in the organs of speech.

<sup>1</sup> Gutzmann, “Sprachheilkunde,” 2d ed., p. 407.

<sup>2</sup> Prospectus of a professional elocutionist.

<sup>3</sup> Chervin, “Du bégaiement et de son traitement,” p. 4.

<sup>4</sup> Findley, “Stammering,” *The Voice*, Vol. VII, p. 54.

"It is a muscular spasm, originating in a nervous weakness. The muscular spasm affects the breathing, the breathing affects the speech, for without breath there is no speech." <sup>1</sup>

"Voice is breath converted into tone by the vibrations of the vocal ligaments or cords in the larynx; and it is in the incoördination of the breathing muscles with those of the vibrating element, delaying the production of tone, that the primary cause of stammering lies. . . .

"Faults of breathing are the primary cause of stammering; the laryngeal faults being secondary." <sup>2</sup>

"If the antagonistic action of both these groups of muscles is in equilibrium, a cessation of expiration takes place. This is the case with the stutterer where the diaphragm sometimes falls into a state of spasmodic contraction which cannot be overcome by the abdominal muscles." <sup>3</sup>

"If the bellows of an organ can, for instance, by blowing too weak a stream of air, be the cause of the instrument not producing sound, in no less degree can the lungs be the cause of the speech-apparatus remaining toneless. They likewise can blow so weakly that the vocal cords will not vibrate, consequently will not make voice." <sup>4</sup>

"The stammerer constricts the throat because the vocal organs, situated at the top of the windpipe, do not receive a strong enough current of breath from below — from the lungs;

<sup>1</sup> Shuldham, "Stammering and its Rational Treatment," p. 31.

<sup>2</sup> Behnke, "On Stammering, Cleft-Palate Speech, Lispings," pp. 38, 41.

<sup>3</sup> Guttman, "Gymnastics of the Voice for Song and Speech; also a Method for the Cure of Stuttering and Stammering," p. 159.

<sup>4</sup> "Kreutzer's Method," *The Voice*, Vol. III, p. 175.

## 6 SYSTEMS OF TREATING STAMMERING

and this upward current is wanting simply because the lungs are not sufficiently compressed or squeezed.”<sup>1</sup>

“Now, what are the causes? They are, first, defective, partial, irregular breathing; second, weak nerves, which produce the abnormal respiration. As soon as these causes are removed, their effect, which is stuttering, must disappear.”<sup>2</sup>

Persons engaged in treating stammering usually endeavor to combat respiratory disturbances with breathing-exercises, which have for their object the strengthening of the respiratory muscles and the establishment of conscious control of the expiratory stream.

Coën says of his system of treatment:<sup>3</sup>

“In my method for the cure of stuttering I remove the partial defective and irregular breathing by respiratory gymnastics. I then proceed with vocal reading and talking exercises. The respiratory gymnastics are as follows: I have the stutterer, with bare chest, assume a position against the wall, as has already been described, and while in this position breathe slowly and deeply. Before taking these breathing exercises, the organs of speech should assume the position of producing “ch” (as in the German *ich*). This is accomplished by bringing the back of the tongue up to the soft palate, leaving only a small passageway for the air. After the stutterer has been sufficiently exercised and can readily pronounce this *ch*-position, he draws the air in slowly and deeply, until the lungs are fully

<sup>1</sup> John Howard, “The Cure of Stammering,” *The Voice*, Vol. I, p. 114.

<sup>2</sup> Coën, “Stuttering,” *The Voice*, Vol. VI, p. 204.

<sup>3</sup> “Stuttering,” *The Voice*, Vol. VII, pp. 8 f.

inflated. If this is rightly done the inspiration will be audible. As the pupil inhales, I press my flat hand against the diaphragm, at first gently, and gradually increasing the force. After the inspiration, the stutterer holds the air in his lungs. In order to do this with all possible exactness, I direct him to knit powerfully the chest and abdominal muscles, and to press the lips firmly together. At first, the inspiration is 5 to 10 seconds long, but after a while it increases to 20, 30 and 60 seconds, according to the age, strength, bodily development and degree of stuttering of the pupil. I am very careful that the retention of the air should be done with the utmost exactness, for even if only a small portion should escape, either through the mouth or nose, the object, which is the strengthening of the respiratory organs, will not be attained, or only imperfectly. After the retention of the air, the stutterer exhales; at one time, suddenly and with full force, in one blast; at another time, slowly in a long, protracted stream. This slow expiration, which in the beginning can only last 5 to 8 seconds, increases, according to the strengthening of the lungs, until 25 to 30 seconds can be used in the exercise.

"After the three breathing acts, which I designate as a respiratory unit, are ended, I direct that the stutterer shall rest a minute or so. These exercises are continued until the pupil is somewhat fatigued, which should be carefully watched, inasmuch as injury would result if the lung gymnastics were continued. In general, the stutterer can practice 15 to 25 minutes without fatigue. These respiratory gymnastics should be gone through daily, preferably in the forenoon, and should be continued during the whole treatment, which usually lasts from 8 to 12 weeks."

Breathing-exercises are usually arranged systematically. The exercises involve various combinations of

## 8 SYSTEMS OF TREATING STAMMERING

inspiratory and expiratory movements and periods during which the breath is held — with or without closure of the glottis.

The preliminary instructions — which vary with the different systems — are usually somewhat as follows :

Do not practise on an empty stomach or directly after eating a heavy meal. Remove all tight clothing before taking the exercises. Practise in the open air or before an open window. While exercising, stand erect, and hold the head erect, but not too far back. Clasp the hands behind the back, as high as possible. Lower them, if necessary, when inhaling. Inhale through the nose. (Many instructors, however, direct their pupils to inhale through the mouth.)

The following exercises may be regarded as typical of the average system in which breathing-exercises form a prominent feature :

1. Inhale through a period of 2 seconds, fully inflating the lungs.

Exhale through a period of 2 seconds, fully deflating the lungs.

2. Inhale similarly through a period of 4 seconds.

Exhale similarly through a period of 4 seconds.

3. Inhale similarly through a period of 6 seconds.

Exhale similarly through a period of 6 seconds.

4. Inhale similarly through a period of 8 seconds.

Exhale similarly through a period of 8 seconds. Etc., etc.

The time is of course increased in these exercises till the maximum period is reached in which the pupil can inhale and exhale with a reasonable degree of

comfort. The stammerer is enjoined to inhale and exhale smoothly, so that in any particular exercise equal quantities of breath are inspired or expired during equal periods of time.

Variations of the above exercises are as follows:

5. Inhale through a period of 2 seconds.  
Exhale through a period of 10 seconds.
6. Inhale through a period of 10 seconds.  
Exhale through a period of 2 seconds.
7. Inhale through a period of 5 seconds.  
Exhale through a period of 15 seconds.
8. Inhale through a period of 15 seconds.  
Exhale through a period of 5 seconds. Etc., etc.
9. Inhale through a period of 2 seconds.  
Hold the breath for 2 seconds.  
Exhale through a period of 2 seconds.
10. Inhale through a period of 4 seconds.  
Hold the breath for 4 seconds.  
Exhale through a period of 4 seconds.
11. Inhale through a period of 6 seconds.  
Hold the breath for 6 seconds.  
Exhale through a period of 6 seconds. Etc., etc.
12. Inhale through a period of 2 seconds.  
Hold the breath for 4 seconds.  
Exhale through a period of 8 seconds.
13. Inhale through a period of 12 seconds.  
Hold the breath for 2 seconds.  
Exhale through a period of 6 seconds. Etc., etc.
14. Inhale discontinuously through a period of 4 seconds,  
alternately inhaling for one second and holding the breath for  
one second.  
Exhale discontinuously through a period of 4 seconds,



## 10      SYSTEMS OF TREATING STAMMERING

alternately exhaling for one second and holding the breath for one second.

15. Inhale discontinuously through a period of 6 seconds, alternately inhaling for one second and holding the breath for one second.

Exhale discontinuously through a period of 6 seconds, alternately exhaling for one second and holding the breath for one second. Etc., etc.

16. Inhale discontinuously through a period of 6 seconds, alternately inhaling for 2 seconds and holding the breath for 2 seconds.

Exhale discontinuously through a period of 6 seconds, alternately exhaling for 2 seconds and holding the breath for 2 seconds.

17. Inhale discontinuously through a period of 8 seconds, alternately inhaling for 2 seconds and holding the breath for 2 seconds.

Exhale discontinuously through a period of 8 seconds, alternately exhaling for 2 seconds and holding the breath for 2 seconds. Etc., etc.

18. Inhale continuously through a period of 4 seconds.

Exhale discontinuously through a period of 10 seconds, alternately exhaling for 2 seconds and holding the breath for 2 seconds.

19. Inhale discontinuously through a period of 12 seconds, alternately inhaling for 4 seconds and holding the breath for 4 seconds.

Exhale through one second, completely deflating the lungs.

20. Inhale continuously through a period of 4 seconds.

Hold the breath for 4 seconds.

Exhale discontinuously through a period of 10 seconds, alternately exhaling for 2 seconds and holding the breath for 2 seconds. Etc., etc.

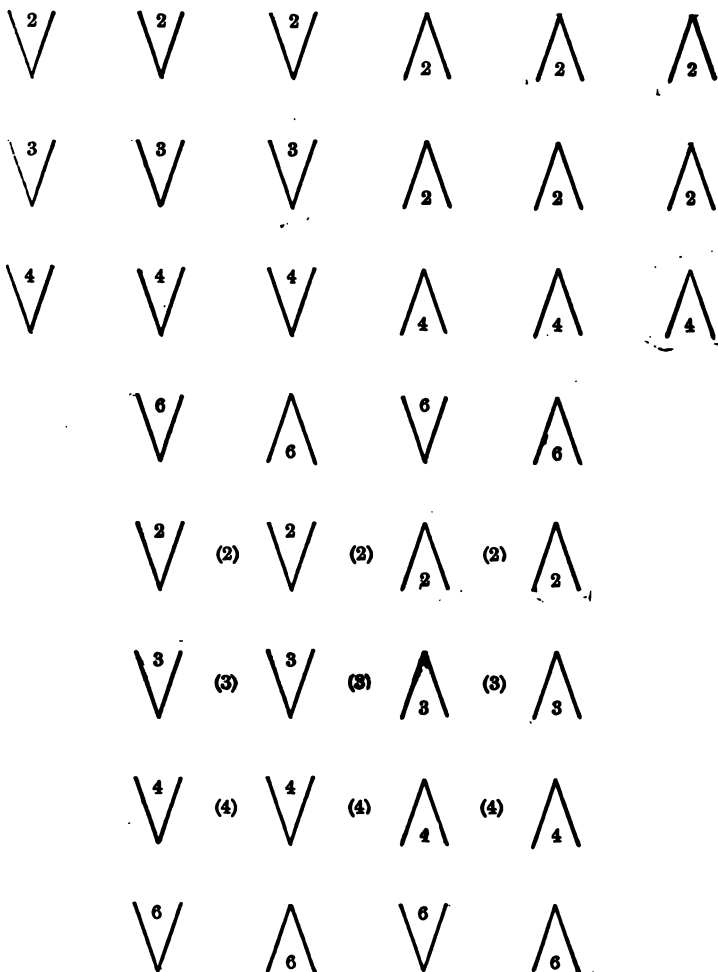
It is evident that countless combinations similar to the above can be devised. In many schools these exercises are taught from charts in which the directions are conveyed by symbols. Inspiration and expiration are represented by vertical and horizontal lines, or by dots and dashes, squares and circles, etc. Periods during which the breath is held are usually indicated by parentheses, figures in the parentheses indicating the length of the pauses.

In the following charts (pp. 12 and 13), which are quite typical, inspiration and expiration are indicated by arrows pointing in the direction in which the breath moves in the trachea. The downward-pointing arrow thus indicates inspiration, and the upward-pointing arrow expiration. The figures above or below the arrows indicate the number of seconds through which inspiration or expiration occurs. The figures in parentheses between the arrows indicate the number of seconds for which the breath is held. When no figure occurs between two arrows pointing in the same direction, the pause between the two inhalations or exhalations is considered to be momentary.

Manifestly the directions can be conveyed much more effectively through these charts than through oral or written instructions. In many schools charts are used exclusively, and are employed literally in hundreds.

When pupils are instructed in classes, the time is

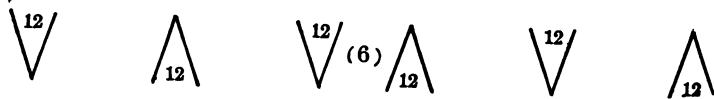
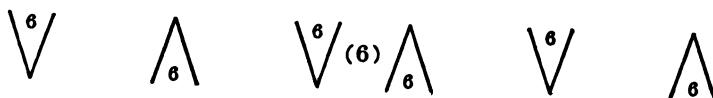
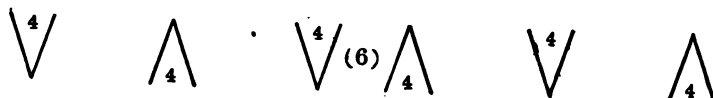
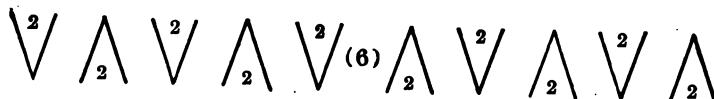
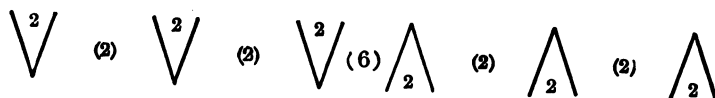
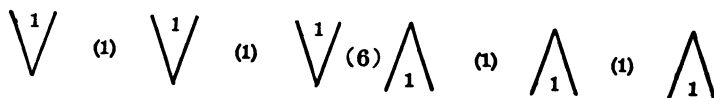
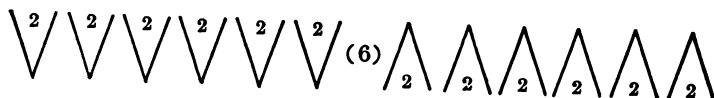
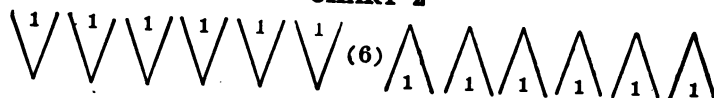
CHART 1



# RESPIRATION

13

CHART 2



either measured by a metronome, or is given by an instructor, who leads the class with a baton or beats time with the hand. In some institutions charts are dispensed with, and the instructor leads the class with a baton and gives directions orally or by gestures. When the pupils practise alone, they usually take the time from a metronome or count mentally.

In many institutions the various sets of breathing-muscles — the chest muscles, intercostal muscles, dorsal muscles, etc. — are exercised separately. The following exercises are quite commonly prescribed :

*Upper Chest Breathing.*<sup>1</sup> — Place the hands upon the chest, with the tips of the fingers on the clavicles. Inhale slowly, filling the upper part of the thorax so that the expansion can be distinctly felt beneath the hands. Inhibit movements of the shoulders, and as far as possible movements of the muscles controlling the lower part of the thorax. Exhale slowly when the upper chest has been fully expanded. Practise the various simple respiratory exercises, using upper chest breathing.

*Costal Breathing.*<sup>2</sup> — Place the hands upon the lower ribs, with the fingers pointing forward and the thumbs back. Inhale slowly, expanding the lower thorax laterally so that the movement can be felt beneath the hands. Suppress upper chest breathing as far as possible. Exhale slowly after inhalation is complete. Practise the simple exercises, employing costal breathing.

Exercise the costal muscles unilaterally, effecting the movement first on the left side and then on the right.

<sup>1</sup> Also designated *clavicular breathing*, *collar-bone breathing*, *shoulder breathing*, etc.

<sup>2</sup> Also designated *lateral breathing*, *side breathing*, *rib breathing*, etc.

*Dorsal Breathing.* — Place the backs of the hands on the dorsal muscles well below the shoulder-blades. Inhale slowly, expanding the thorax beneath the hands and suppressing expansion in other parts of the thorax as far as possible. Exhale slowly. Practise dorsal breathing with the simple exercises. Exercise the dorsal muscles unilaterally.

*Diaphragmatic and Abdominal Breathing.*<sup>1</sup> — Place the hands on the abdomen, with the thumbs on the lowest ribs. Inhale slowly, expanding the lower part of the thorax by contracting the diaphragm. Restrict the movement as far as possible to the diaphragm and the abdominal muscles. When inhalation is complete, exhale slowly by contracting the abdominal muscles and relaxing the diaphragm. Practise this form of breathing with the various simple exercises.

*Full Breathing.* — Inhale slowly, expanding the entire thorax. Exhale slowly. Practise the simple exercises, bringing all the respiratory muscles into play.

The following procedure is often prescribed for giving one consciousness of the diaphragm :

“Lie down on the back, the head somewhat elevated; put the lungs into the ‘state of readiness’; for the better recognition of the matter lay the hand on the abdomen, and now, *without allowing the upper portion of the chest to sink*, emit the air slowly from the lungs, and it will be perceived by the slowly falling hand that the abdomen shrinks; that is to say, the diaphragm relaxes from the contraction by which it pushed the abdomen outward; and thus, pressing on the lungs, drives the air in them up and out.

“Inhale air again immediately and the hand will rise; that is to say, the abdomen will be pushed out, as before. This is the

<sup>1</sup> Also designated *waist breathing*, etc.

result of the action of the diaphragm; and by continued practice, interrupted by the necessary pauses, the consciousness of directing the diaphragm at will, will slowly be attained; for, although the diaphragm is an *involuntary* muscle, yet it can be . . . partially controlled by our will.

"Now practise the exercise in an erect position; and, while singing a tone, it will soon be perceived that (without action of the abdominal muscles) the sounding expiration brings about but a faint result. Now let the abdominal muscles assist; contract them slowly, that is to say, press the abdomen inward while exhaling (and this can be done only by means of the abdominal muscles); exert a counter-pressure with the diaphragm which slowly subsides in proportion to the degree of pressure of the abdominal muscles, and it will be found that the effect is much stronger."

The following exercises are also frequently recommended for strengthening the diaphragm and establishing consciousness of diaphragmatic action:

1. Dilate the lower part of the thorax by contracting the diaphragm. Hold the breath, and by relaxing the diaphragm and contracting the abdominal muscles, force the breath to the upper part of the thorax. Now contract the diaphragm once more and bring the breath to the lower part of the thorax. Continue these alternate movements as long as the breath can be comfortably retained.

2. Lie upon the back, and place several heavy books on the abdomen. Practise diaphragmatic breathing, taking care that the books are raised as far as possible with each inspiration. Practise reading aloud, making the breathing diaphragmatic and attending carefully to the muscular action.

3. Place several heavy books on the chest and one comparatively light one on the abdomen. Now read aloud or recite,

and breathe meanwhile with the least muscular effort — in other words, breathe in the lower part of the thorax in order that the pile of books may not be lifted with each inspiration.

4. Practise "waist-breathing" while wearing a light elastic belt. Etc., etc.

Different institutions of course employ different combinations of breathing-exercises — and in many cases the different exercises or modes of breathing receive local names. Thus we hear of "puff and pause" and "puff and breathe"; and of "effusive," "expulsive," and "explosive" expiration; "aspirate" and "silent" expiration, etc. In a few schools, use is made of the spirometer, special breathing-exercises of course being employed. When a spirometer forms part of the equipment, great emphasis is usually laid on "lung capacity."

In many institutions, again, breathing-exercises are practised in connection with dumb-bell exercises. This is particularly the case in the United States of America. These exercises may, however, have originated in England, for Charles Kingsley recommended them nearly half a century ago. In a letter to a friend he says:<sup>1</sup>

"Take a pair of very light dumb-bells and exercise your chest with them, taking care to *inspire* deeply when you raise them over your head, and when (consequently) the ribs are raised, and the lungs expanded. Do this slowly and quietly,

<sup>1</sup> "Charles Kingsley : his Letters and Memories of his Life" (edited by his wife), Vol. II, p. 260.



and I think you will find, though it will not cure you, yet it will relieve and literally *comfort* your breathing enough to give you confidence in my hints."

The directions given by Kingsley are virtually a description of a popular exercise practised daily in a number of American institutions.

Another respiratory exercise that one finds in many English, French, and German stammering-schools is reading in a whisper. As a simple breathing-exercise it is recommended by Bell in his "Principles of Speech":<sup>1</sup>

"A very useful exercise for strengthening the respiration consists in *reading* in a *strong, loud WHISPER*. This will be found laborious at first, but practice will make it more easy. It should not, however, be long continued, on account of the giddiness which it is apt to produce."

Bell also recommends the following mode of practice:<sup>2</sup>

"A useful exercise for the regulation of the breath may be obtained in *counting*. Thus, to acquire facility of silent respiration, count slowly and distinctly, with a free inhalation by mouth and nostrils *before each number*; carefully subduing the least tendency to audibility or suction in the act of inspiration, and heaving the chest naturally, without any upward action of the shoulders, or other bodily movement.

"To gain power in retaining the breath and prolonging the expiration, count five, six, ten, twenty, fifty, or any greater practicable series of numbers, *with each breath*; and continue the exercise for several minutes, without allowing the chest to fall, or pausing longer than is necessary to inhale before each group of numbers."

<sup>1</sup> "Principles of Speech," 5th ed., p. 9.

<sup>2</sup> *Loc. cit.*, p. 241.

The foregoing is a cursory review of the respiratory *exercises* commonly employed in institutions for the treatment of stammering. Besides these exercises there are often recommended expedients and practices relative to various modes of breathing during actual speech. These measures will be considered later. At this point it will be well to discuss the efficacy of the exercises already reviewed.

It may be stated unqualifiedly that breathing-exercises furnish an excellent instrument for elocutionists in treating physical stammering; but if the writer's theory of causality is correct, there is little more that can be said in their favor. A competent instructor, by using breathing-exercises and other elocutionary measures, can often eliminate physical stammering in a surprisingly short period; but the primary cause of stammering — the amnesia — remains unaffected. If the pupil has unreserved confidence in the system employed, he is temporarily absolved from fear, bewilderment, and inhibitive auto-suggestion; and, for a time at least, stammering is reduced to its pure form. But, since the primary cause of the speech-defect persists, confidence is rapidly lost, and the secondary causes return. It is evident that respiratory and similar exercises can in the end effect little more than the removal of stammering that is of a purely physical nature.

The extreme elaboration of breathing-exercises

must be ascribed to commercial competition rather than to any advantage or peculiar potency that complex exercises may possess. — The practice of holding the breath during these exercises is valueless unless the glottis remains open, for no muscular activity is required to inhibit respiration when the outlet for the breath is obstructed. The practice of holding the breath for any considerable length of time is injurious. — The employment of exercises for the individual sets of breathing-muscles is undoubtedly to be recommended. — The use of mechanical restrictions to free muscular action during respiration has little to commend or condemn it. Lifting weights placed on the abdomen and stretching elastic belts undoubtedly strengthens the diaphragm, but a strong diaphragm is not necessarily a diaphragm under complete control. It is futile, of course, to endeavor to combat throat-contraction and “tonic spasms” of the articulative organs by increasing the strength of the expiratory current. — As regards the use of the spirometer, it is certain that no case of physical stammering has ever been cured with this instrument that could not have been cured without it. The practice of working for lung capacity is an inanity, for lung capacity bears no necessary relation to respiratory control. — Breathing-exercises practised in conjunction with dumb-bell exercises are probably less effective than breathing-exercises practised without them. They have the

advantages, however, that they break the monotony for the pupil and can be dubbed "scientific." — Reading in a loud whisper undoubtedly calls for increased muscular activity, and probably has some value as a respiratory exercise. The counting business is probably less valuable.

We shall now examine the common expedients relative to respiration that are considered to be efficacious when applied during actual speech.

The most commonly recommended measure is, of course, careful observance of the initial inhalation. This measure was recommended by Avicenna, the Arabian physician, a thousand years ago; and it has been recommended by thousands of persons since. Kingsley advocates repeated inspiration:<sup>1</sup>

"Before beginning to read, take two or three long full breaths. And also (and this is an excellent rule) before you begin to speak to any one, especially if you are nervous, take two or three breaths and then open your mouth and speak. You will find the nervousness go, and the words come out, as by miracle. Remember Balaam's ass could not speak, till his 'mouth was opened.'

"At each full stop, you should stop, and take a long breath; at a colon, a less full, at a semicolon, less, at a comma, less still. But keep *sacredly* to the *habit of breathing at every stop*."

The advice to take breath before beginning to

<sup>1</sup> "Charles Kingsley: his Letters and Memories of his Life," Vol. II, p. 261.

speech is fitting when the stammerer evinces a tendency to speak on an empty lung, as do most subjects when physical stammering is much in evidence. But the procedure will eliminate only one of the features of physical stammering, and it is by no means the panacea that it is usually represented to be.

The stammerer is often advised to take breath before every difficult word — to stop short, inhale, and proceed. An English teacher of stammerers makes reference to the expedient as follows :

“Now, I have found patients stumbling over this couplet ‘many a time and oft,’ and I have always stopped them in their reading and asked them to make the *Ka* sound detached from all other sounds or contexts, and they have generally managed to give it without serious trouble or difficulty; but when they have gone back to Longfellow’s lines, it has been a kind of valley of rocks, a Diablerets to them, and they have stumbled about in the most hopeless fashion, until I succeeded in making them take breath immediately before the occurrence of the *Ka* sounds. Like singers, who just before a musical peroration which winds up with some high and long-sustained note, take a full inspiration, so my stammering patients put themselves, as it were, into musical form, to insure elocutionary success.”

The expedient of inhaling before difficult words is employed by many elocutionists. It is, however, entirely unnatural and has nothing to recommend it, — except that it may, like any other measure, alleviate stammering for a time by revoking secondary causes

(fear, multiple thought, etc.) through the power of suggestion.

A two-thousand year old "remedy" for stammering<sup>1</sup> consists in economizing breath during speech. This particular remedy starts a new career at rather regular intervals. The method of exhalation is described by one writer as follows :

"In the act of speaking and reading, the patient must take care to control thoroughly the outward passage of the breath, and to let it escape as slowly as possible. The expiration should be thoroughly economized; none of it should be wasted by letting any escape before the act of speech begins. It should not be allowed to come out in jerks or gasps, but its passage should be easy, steady, and gradual; for it cannot be too firmly borne in mind that it is on the extension, combined with the regularity of expiration, that the intensity, the duration, and the steadiness of all vocal vibrations depend; and Señor Garcia's test of practising the voice with a lighted candle held before the mouth may be applied here. If the flame be extinguished, or even wavers much, the patient may take it as a sign that he is expending too much air."

But the other side of the argument is also represented :

"The main thing to be attended to, and which, in fact, is the groundwork of the whole system of cure, is to expire the breath strongly each time when attempting to speak, the lungs being previously filled to the utmost; or, in other words, to reverse the habit of stuttering, which is that of trying to speak without expiring any air."

<sup>1</sup> Apparently first recommended by Celsus.

And thus another writer :

"Let him [the stammerer] hold a lighted candle in front of him as if he intended to blow it out ; then endeavor to speak slowly, at the same time blowing the words out with sufficient force to extinguish the light, and if he continues to do this about once a day, say at bedtime, and at all times when he makes an effort to speak to 'blow' his words out slowly, he will find it beneficial to his speech. I know of people who have cured themselves in this way, and who show no signs of stammering."

In support of strong exhalation the words of Kingsley are sometimes cited that "there has been at least one frightful stammerer ere now who spoke perfectly plainly as long as he was in the saddle." The fact is also adduced that Satyrus required Demosthenes to declaim while walking uphill. Neither argument is very convincing.

Apparently the forceful expiration is intended to offset throat-contraction and the various "spasms"; and presumably the restrained expiration is intended to counteract the habit of exhausting the breath immediately before or during speech. It seems reasonable for one to believe that either of these expedients might prove valuable in particular cases for removing specific faults of utterance; but it seems equally reasonable to believe that these expedients, if applied indiscriminately, would be more likely to engender faults than to remove them.

Neither measure, of course, can in the least alleviate pure stammering.

Another "remedy" for stammering is the practice of contracting the abdominal muscles and relaxing the diaphragm at every syllable. One English writer describes this particular procedure as follows:

"In order to ascertain the degree of inefficiency in the management of breath in a stammerer, I place him on a couch, flat on his back, comfortably raising his head on a pillow, and then give him some diaphragmatic drill. As soon as he has acquired sufficient control over the diaphragm, I direct him to say the alphabet, taking a very short inspiration before each letter by *contracting* the diaphragm, and then attacking the letter by *relaxing* the diaphragm. I control these movements by holding my hand on his abdomen, and he now, to the amazement of friends who may have accompanied him, pronounces every letter as quietly and as easily as they could do themselves."

This expedient is still in vogue in a few stammering-schools in Europe and America. Only recently the writer heard of its being recommended by a Philadelphia physician. The "remedy," however, is worse than ineffectual; it is pernicious. It cures neither pure stammering nor physical stammering; it merely establishes a vicious form of utterance.

Another alleged remedy for stammering is diaphragmatic breathing. This is the great catholicon of present-day stammering-schools in which elocutionary methods are employed. In practically every stam-



mering-school in America the pupil begins by reforming his habits of breathing if he has formerly employed the upper chest to any extent in respiration. In Europe the enthusiasm for this method is not quite so great, but where diaphragmatic breathing is employed, it is usually represented as an infallible remedy. The whole business is, however, a fiasco. The facts in the matter are that diaphragmatic and costal breathing are exceedingly valuable to the average elocutionist or public speaker; but that diaphragmatic breathing is no cure for physical stammering or amnesia. Lower thorax breathing may be preferable to upper thorax breathing; but if this is the case, when one has acquired lower thorax breathing he has simply acquired the preferable method — that is all. Stammering is not breathing in the upper part of the thorax, as many elocutionists seem to suppose.

The last two expedients relative to respiration that we have to consider are inhaling exclusively through the nose or exclusively through the mouth. Both methods have ardent advocates. The writer of an English pamphlet says:

“I meet stammerers in all sorts of ways and places. One instance of an accidental meeting may be worth mentioning, as the stammerer is, I hope, on a fair way to complete cure. I had to leave some things at a Left Luggage Office, and the young official who took charge of them was a bad stammerer, so I assured him that I was much worse once, and left him with the advice: ‘Always shut your mouth before you begin

to speak, so that the breath can be taken in through the nose.' I have taken every opportunity I could to give him a few hints since I first met him, and his success, and the opinion of others that the system I propose is the correct one, have induced me to try in a few short chapters to help those whose lives are troubled by inability to produce words either with distinctness or certainty."

In opposition to this procedure a German author writes :

"Normal quiet breathing, and breathing during speech, are two different things: the former takes place through the nose; the latter through the mouth."

An English writer advises :

"Above all, never catch in the breath through the *mouth*, when speaking, reading, or singing; but always through the *nostrils*. The same rule applies to walking and all athletic exercises."

And so it goes.

The writer has in mind an American school where the pupils are admonished always to breathe through the nose; an English school where the pupils are taught to inhale through the wide open mouth;<sup>1</sup> and a German school where the pupils are directed to open the mouth to about the breadth of a straw.

The whole question of inhaling through the mouth

<sup>1</sup> The pupil inhales through the mouth till conscious of a feeling of coldness in the glottis; he then begins to speak from the "open position."

or nose has, however, little bearing on the subject of stammering. Breathing through the nose when one is silent is a hygienic measure; breathing through the mouth during speech is a matter of convenience. Neither mode of breathing will cause or cure stammering. The subject scarcely merits discussion in the present connection.

## CHAPTER III

### VOCALIZATION AND VOWEL-PRODUCTION

SPEECH is frequently said to consist of the three elements—respiration, vocalization, and articulation. But vocalization is merely the production of “un-colored” sound; hence we have vowel-coloration to account for. It is evident that there are four elements in speech rather than three. In this chapter, however, we shall, as a matter of convenience, treat vocalization and vowel-production conjointly, making at different points whatever distinctions may be necessary.

It has already been observed (Vol. I, pp. 181 ff.) that one of the commonest views in regard to stammering is that the disturbance is caused by a failure of the *voice*.

“To the question, what is stuttering? I have only the answer: *Stuttering is a refusal of the voice.*”<sup>1</sup>

“The term ‘stammering’ is properly applied to that form of impediment of speech which manifests itself by a stemming back of the sound or a hesitation in the appearance of the voice.”<sup>2</sup>

<sup>1</sup> “Kreutzer’s Method,” *The Voice*, Vol. III, p. 175.

<sup>2</sup> Ashmann, “Stammering and Stuttering,” *The Voice*, Vol. III, p. 138. The author proceeds to define stuttering as “an impulsive, irregular breaking forth of the voice.”

"Concerning the essential factor in stammering I would express myself as follows: Stammering consists in a temporary ineptitude in the management of the voice — which ineptitude may be conditioned by various influences. There is inability to impart to the vocal cords the proper degree of tension for the production of voice and then to expel the breath through the glottis in a stream sufficient to set the cords in vibration."<sup>1</sup>

"Both impediments (stammering and stuttering) are frequently found in the same person, and both are due to the same cause — inability to vocalize."<sup>2</sup>

It has already been remarked (Vol. II, p. 4) that failure of the voice is often ascribed to a failure of the expiratory current. Failure of voice is also ascribed to spasm of the vocal cords (Arnott, Müller, Schulthess, and others), and occasionally to general throat-contraction. Concerning the latter cause one writer remarks:<sup>3</sup>

"If we begin to speak at any point above the diaphragm, the speech suffers according to the location, the amount of misplaced energy and the temperament of the speaker. If all the energy is centred at any such point, there can be no speech, because it is only force in the breathing-muscles that can drive the breath against the vocal cords; and as the breath, whether vocalized or not, must pass through the glottis, it is plain that if the muscles at the glottis tie up the passage, the speech is hindered in the degree of the force of the contraction.

<sup>1</sup> Wyneken, "Ueber das Stottern und dessen Heilung," p. 15.

<sup>2</sup> Behnke, "On Stammering, Cleft-Palate Speech, Lispering," p. 10.

<sup>3</sup> Thorpe, "Speech-Hesitation," pp. 30, 75.

"This is the distinguishing symptom in speech-hesitation. It is one cause of spasm of the glottis. If the contraction stops at the glottis, only the vowels are hindered; but if it extends, as it usually does, to the lips and the tongue, the consonants also are affected. . . .

"Speech-hesitation has but one cause, which is misplaced contraction."

Two general methods are followed in combating defective production of the voice. One method is to train the pupil in various exercises with a view to establishing voluntary control of the vocal organs; the other is to practise the pupil in some special mode of utterance with the object of counteracting the supposed cause of stammering during actual speech. We shall consider first the *exercises* that are currently employed.

A popular exercise for infixing consciousness of the movements of the entire larynx is as follows:

Pronounce in a monotone the vowels *ē, ā, ah, aw, ō, ōō*. Pronounce these vowels in the reverse order. Pronounce *ē, ōō, ē, ōō, ē, ōō; ah, aw, ah, aw, ah, aw; ē, ōō, ē, ōō, ē, ōō*, etc. Note the gradual descent of the larynx in the vowel-series from *ē* to *ōō*. Note the ascent of the larynx when the vowels are pronounced in the reverse order. Note the extreme movement in *ē-ōō*, and the relatively slight movement in *ah-aw*.

An exercise frequently prescribed for establishing consciousness of the vocal cords is the practice of the "direct attack" (*glottis-stroke, coup de la glotte*, etc.)

and "indirect attack" of the voice (*glide of the glottis*, etc.). Guttman describes these two methods of vocalization in the following words:<sup>1</sup>

"In the 'direct attack' the vocal cords come into contact throughout their entire length, from the front backward, so that the lower part of the larynx is completely separated from the upper, and the approach of the vocal cords is rapid and decided; at the same time the vocal cords become shortened, and must, therefore, with the immediately following intonation, alter their degree of tension, their shape, length, and thickness, according to the sound which is to be produced, and must separate somewhat. A tone thus produced will be marked and separated from other tones.

"In the 'indirect attack,' on the contrary, the glottis is not completely closed by the approach of the vocal cords. Here their length, tension, shape, etc., are at once such as are required for the production of the desired tone, and, consequently, the vibrations begin immediately after the approach of the vocal cords without any change in their length or tension, as is necessary in the 'direct attack.'"

The practice of the glottis-stroke is described by another writer as follows:<sup>2</sup>

"Assume standing position with active chest; take full breath, and whisper forcibly the word 'who' three times. Repeat the same. Now whisper 'who' twice, and speak it aloud the third time; then whisper 'who' once, and speak it aloud the second and third time; then speak 'who' aloud three times. Now speak 'who' twice, and the third time say 'oo'

<sup>1</sup> "Gymnastics of the Voice," 3d ed., pp. 60 f.

<sup>2</sup> Fobes, "Handbook of Elocution Simplified," pp. 24 f.

as those letters sound in the word *woo*; then say 'who' once, and 'oo' the second and third time; then say 'oo' three times. You should make both the whisper and vocal sound very short and sudden, without any feeling of contraction or effort in the throat or mouth. It should seem to you as if the sound came from the lips; and, while you are energetic in the exercise, it must be done with perfect ease. You have thus proceeded, from an easy, forcible whisper, to an easy, forcible sound, and have thus obtained what is called the 'Glottis Stroke.' After diligent practice on the above exercise, use any of the short vowels, speaking each vowel three times very shortly, as you did the vowel-sound *oo*."

The direct attack is also practised by inhaling, holding the breath for an instant, then abruptly producing voice. This procedure is followed with the different vowels. Another method is to prolong a vowel and interrupt it a number of times by occluding the glottis. A series of staccato vowels of course results. The indirect attack is practised by prefixing an "inaudible" *h* to the various vowels; by commencing vowels in a whisper and finishing them with voice; etc. Different methods of practising the direct and indirect attack obtain in different institutions, but the methods above described will exemplify the general procedure.

Another exercise for establishing consciousness of the vocal cords consists in drawing or emitting a long breath and interrupting it repeatedly by closing the glottis. A variant of this exercise consists in inhaling



and exhaling in short breaths, and occluding the glottis at the end of each inhalation and exhalation. In these exercises the "click of the glottis" can be heard as the vocal cords separate after complete contact. It is to this particular feature, and to the feeling of glottal action, that the pupil is admonished to attend.

An exercise that is sometimes prescribed for strengthening the laryngeal muscles and making them "more pliable and subservient to the will" is practising the different vowels in octaves. The stammerer begins by singing the vowels in the lowest possible pitch. He produces them a number of times in this manner, and then practises them in a pitch an octave higher. Later the pitch is raised again, and finally the stammerer sings the vowels in the highest pitch that he can comfortably produce. As the work progresses, the exercises become more complex, and the pupil is required to jump rapidly from one pitch to another, to change the vowels as he alters the pitch, and so on. The instructor usually indicates the pitch required by striking the appropriate notes on a piano.

"The pupil should, in addition, make the following exercise: utter the whole sentence in the manner of the chromatic scale; that is, begin with a high tone and descend a half tone with each syllable; and having reached the end of the sentence, repeat it in like manner but with each syllable ascending a half tone."

Exercises in high, low, and middle pitch are recommended by an English teacher of stammerers. The exercises prescribed are as follows:<sup>1</sup>

- "L. 'So he vanished.' *This line to be whispered.*
- "H. 'Hell-hound, by thee my child's devoured.' *Full voice.*
- "H. 'For I'm to be Queen of the May, mother, I'm to be  
Queen of the May.' *Light voice.*
- "H. 'Ruin seize thee, ruthless king.' *Full voice.*
- "L. 'And the grave is not its goal.' *Full voice.*
- "M. 'That does my wits belabor.' *Ordinary voice.*
- "H. 'He's gone.' *Whisper.*
- "M. 'No longer, Deary, Duck, and Love.' *Ordinary voice.*
- "H. 'Charge, Chester, charge; on, Stanley, on.' *Full voice.*
- "M. 'Down fell a fine horse-chestnut in its prickly shell.'  
*Ordinary voice.*
- "L. 'The other shape, if shape it might be called, that  
shape had none distinguishable in member, joint, or  
limb.' *Full voice.*
- "M. 'I thank you.' *Ordinary voice.*
- "M. 'The pen is mightier than the sword.' *Full voice.*
- "L. 'We buried him darkly at dead of night.' *Full voice.*
- "M. 'Now wasn't that a pity?' *Ordinary voice.*
- "M. 'Entreat me not to leave thee.' *Ordinary voice.*
- "H. 'I sprang to the stirrup.' *Full voice.*
- "L. 'All into the valley of death rode the six hundred.'  
*Full voice.*
- "M. 'In my soul, I loathe all affection.' *Ordinary voice.*
- "H. 'The wind was high.' *Whisper.*
- "M. 'To Giles he went and put the case with circumspect  
invention. Thou fool, cried Giles, I'll make it clear  
to thy dull comprehension.' *Ordinary voice.*

<sup>1</sup> H, M, and L indicate high, middle, and low pitch.

- "L. 'Not a drum was heard, not a funeral note.' *Full voice*.  
 "H. 'You must wake and call me early, call me early, mother dear.' *Light voice*.  
 "M. 'No weasels e'er were thinner.' *Ordinary voice*.  
 "H. 'And shall he die, and unavenged? Arise, ye Goths, and glut your ire.' *Full voice*."

Inflection-exercises are also frequently resorted to for strengthening the muscles of the larynx, etc. The rising, falling, and circumflex inflections are practised on various isolated vowels and words, and are practised in different passages in which the appropriate inflection is indicated by diacritical marks. The directions for such exercises are typically as follows :

Practise the rising inflection on the word *No* (*No?*), using the word as though putting a question with the utmost surprise. Finish the word in the highest possible pitch.

Practise the falling inflection on the word *No* (*No!*), using the word as though answering a question with the utmost emphasis. Start with the highest possible pitch, and end with the lowest possible pitch.

Similarly practise the words *I, you, they, now, well*, etc., first with rising and then with falling inflection.

Similarly practise the various vowels with rising and falling inflection.

Practise the vowels with rising-circumflex inflection, beginning each vowel in the highest possible pitch, descending to the lowest, then rising again to the highest.

Practise the vowels with falling-circumflex inflection, beginning each vowel in the lowest pitch, rising to the highest, and descending again to the lowest.

Practise monosyllabic words with rising-circumflex and falling-circumflex inflection.

Practise short interrogative sentences, exaggerating the rising inflection — “Are you really *sure*?”

Practise short affirmative sentences, exaggerating the falling inflection — “I *am* sure.”

Practise the rising-circumflex inflection in short sentences indicative of doubt and irony — “Hath a *dog money*?”

And so forth.

Inflection-exercises are frequently practised from charts, rising and falling inflections being indicated by various arbitrary symbols. Occasionally inflection-exercises are combined with respiratory exercises, etc. In the following representative chart (p. 38), rising inflection is indicated by a line ascending from left to right ( / ), and falling inflection by a line descending from left to right ( \ ). Inclined lines in juxtaposition indicate rising-circumflex or falling-circumflex inflection. Horizontal lines indicate monotonic voice. The vowels to be practised are given with the inflection-marks. Inspiration occurs as convenient.

Similar exercises are prescribed for all the long and short vowels and the diphthongs.

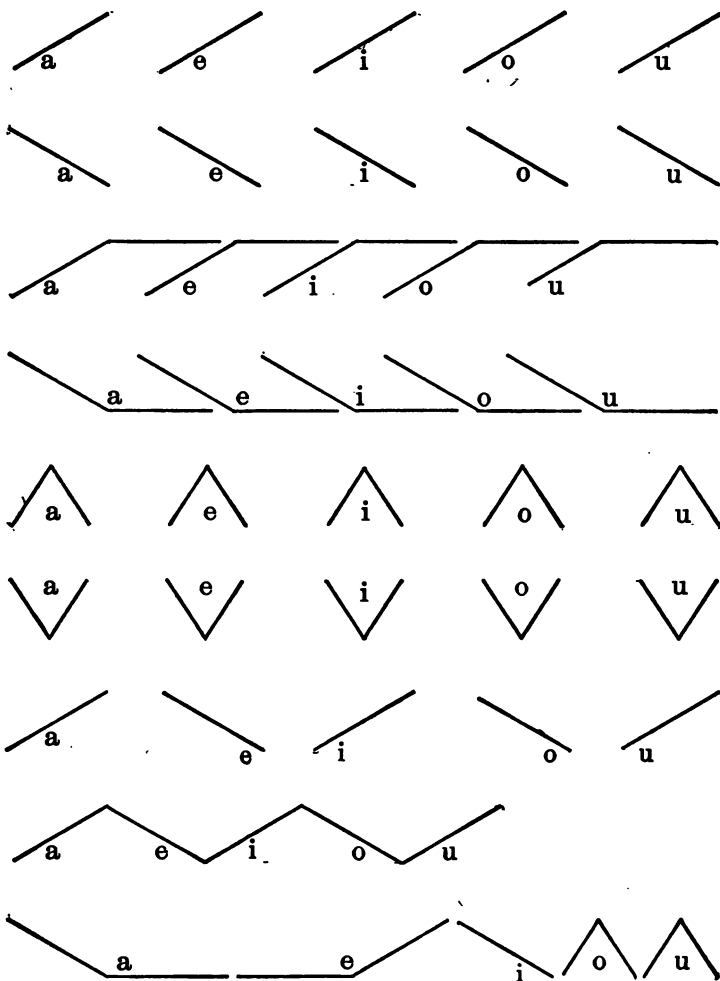
The following sentences for the practice of inflection are prescribed by an English teacher of stammerers:

“John sold a horse.<sup>1</sup>

“John sold a cow and a horse.

<sup>1</sup> The inflection-marks indicate rising and falling inflection by their inclination, as described above.

# INFLECTION-CHART



"John sold a bull, a cow, a calf, and a horse.

"John sold a pig, a bull, a cow, a calf, and a horse.

"John sold a sheep, a lamb, a pig, a bull, a cow, a calf, and a horse.

"John sold a cow, not a horse.

"John sold a bull, a cow, and a calf, not a horse.

"The horse belongs to John.

"The cow and the horse belong to John.

"The sheep, the lamb, the pig, the bull, the cow, the calf, and the horse belong to John.

"You promise Denmark assistance? you command the channel fleet?

"Oh! it was you promised and never fulfilled! it was you who wanted to command the channel fleet, was it?"

Another exercise sometimes resorted to for strengthening the larynx is shouting, or declaiming in a loud voice. Occasionally the vocal exercises are practised systematically in a voice as loud as the pupil can comfortably produce. These measures are, however, not very commonly employed.

The exercises above described have for their ostensible purpose the strengthening of the laryngeal muscles and the establishment of conscious control of muscular action. Innumerable vocal exercises are practised in different stammering-schools for which, as a rule, no very definite purpose is assigned; they may be used indifferently for exercising the larynx or for furnishing systematic practice on the vowels. The exercises about to be described are


decidedly of this indefinite type; but they are found in most institutions for the treatment of stammering, and must therefore be recorded.

We quote first the following general directions for vocal exercises, which are taken from two different sources:

"These [vocal gymnastics] are joined to the respiratory gymnastics. As soon as the stutterer becomes somewhat fatigued by the lung gymnastics, and after he has rested a few minutes, he proceeds to the vocal exercises. These are also to be taken in the same bodily position as the respiratory gymnastics. After a long, deep inspiration the stutterer forms the vowels with a full chest-voice, prolonging the sound as much as he can without special effort. This so-called vocalization should be executed with the greatest exactness, observing the following rules:

"Begin the vowel immediately after the inspiration, and prolong it as long as the air lasts. During the vocalization the strength of the tone should remain the same; it should not be begun strong and then grow weaker. Care must also be taken that the voice does not tremble, and that there is no cessation of sound, while the pitch of tone should be the natural one of the individual. The tone or vowel should not be screamed out, as this would produce hoarseness and fatigue, and would cause the stutterer to form the habit of an unnatural way of talking. In the beginning of these exercises the prolongation of the vowel is usually from 10 to 15 seconds, but, with increased respiratory power, the stutterer is able to prolong it 20 to 30 seconds without fatigue. All of the vowels are to be practised in a similar manner.

"The vocal gymnastics should be interrupted by short rests, and should be continued daily throughout the entire course. In order to avoid fatigue, it is recommended to take a middle



pitch tone, and retain it during the whole time of practice. After such exercises, in the beginning of the treatment, the stut-terer is dismissed with the direction to keep quiet, and not to take severe bodily exercise or to forcibly use his vocal organs."

From the second source we have the following :

"Breathe in as before (through the nose and filling the waist), separate the teeth well and whisper out the following vowels, each three times: (*A-E-I-O-OO-AH*). Use about five to ten seconds in taking the air into the lungs and about the same time in whispering out the letter. Now breathe in as before (slowly through the nose), and as the air goes out sound these same vowels out aloud, each one three or more times. Make the outgoing sounds at least ten seconds in length if you can. Later you can sit at the piano or organ and sound them out in various keys (or pitches of the voice) although the lower tones are the best for you. Keep the mouth well open in doing this. This is the reason you should stand before a mirror until you are sure that you are doing it well.

"Next, breathe in with a little shorter breath and speak these same six sounds (*A-E-I-O-OO-AH*) all together in one outgoing breath, with widely separated teeth and all the sounds connected together in a talking manner, very much as if you were counting one-two-three-four-five-six without stopping and at a moderate rate of speed. Do this several times and many times a day, whenever you have an opportunity."

Vocal exercises are usually systematized so that every vowel is produced with every mode of utterance that the system embraces. The drill-books of some institutions contain more than a hundred pages of vocal and similar exercises. It is evident that all the different vocal drills of the different institutions



cannot be given here in detail. The writer appends merely a few selected exercises from miscellaneous sources to illustrate the general features involved. The other exercises are little more than variants. Herewith the miscellany :

Inhale: enounce the vowel *ā* in a whisper, prolonging it as long as possible.

Inhale: enounce similarly the vowel *ē*.

Inhale: enounce similarly the vowel *ī*.

Inhale: enounce similarly the vowel *ō*.

Inhale: enounce similarly the vowel *ū*.

Inhale: enounce the vowels *ā, ē, ī, ō, ū*, in one breath.

Practise the vowels *ā, ē, ī, ō, ū*, in different orders and combinations.<sup>1</sup>

Practise the vowels with voice, producing them with natural pitch and intensity, and prolonging them as long as possible.

Practise the vowels with natural pitch and maximum intensity.

Practise the vowels with natural pitch and minimum intensity.

Practise the vowels in natural pitch, and increase the intensity of the voice (with each vowel or series) from minimum to maximum.

Practise the vowels in natural pitch, beginning in a whisper, then vocalizing with minimum intensity and increasing to maximum intensity.

Practise the vowels in natural pitch, and decrease the intensity from maximum to minimum.

Practise the vowels in natural pitch, beginning with maxi-

<sup>1</sup> The vowels *ā, ē, ī, ō, ū* are replaced in some institutions by the series *ē, ā, ah, aw, ō, ōō*; or the series *ā, ē, ī, ō, ōō, ah*; or by Pitman's long and short vowels (Vol. I., p. 193).

imum intensity, decreasing to minimum, and finally ending in a whisper.

Practise passing in natural pitch from minimum to maximum intensity, and again to minimum, on the same vowel with but one inspiration.

Practise passing in natural pitch from maximum to minimum intensity, and again to maximum, on the same vowel with but one inspiration.

Practise the vowels in natural pitch, varying the intensity repeatedly from normal to maximum.

Practise the vowels in different pitches with different degrees of intensity.

Practise the vowels, varying the pitch from vowel to vowel: in other words, sing the vowels.

Practise the vowels with various modes of inflection.

Practise the different vocal exercises with direct and indirect attack.

Practise stopping the voice by suddenly closing the glottis.

Practise stopping the voice by suddenly opening the glottis; *i.e.* change suddenly from voice to whisper.

Practise intermitting the voice by repeatedly closing the glottis.

Practise intermitting the voice by repeatedly opening the glottis; *i.e.* drop repeatedly from voice to whisper.

Practise vocal exercises while marching, — uttering one vowel to a step.

Practise vocal exercises in connection with dumb-bell exercises.

Practise vocal exercises and dumb-bell exercises in connection with marching. Etc., etc.

In some institutions a number of these exercises have been endowed with special names. Thus we hear of “expulsion and explosion,” “expulsive and explosive

#### 44      SYSTEMS OF TREATING STAMMERING

stress," of "tremor," "swell and stop," and of such practices as "swelling" and "dilating" sound, etc.

Vocal exercises are often taught from charts. They may then become exceedingly complex. We reproduce below, for illustration, four charts taken from four different sources, with the symbols in each case transformed to those of a common system. The inspiration sign is that already employed (V). A dotted line indicates whispered utterance, a solid line continuous voice. Pauses are momentary unless the length of the pause is indicated in seconds by figures in parentheses.

**CHART 1<sup>1</sup>**

V \_\_\_\_\_ h \_\_\_\_\_

V \_\_\_\_\_ h \_\_\_\_\_ a \_\_\_\_\_

V \_\_\_\_\_ a \_\_\_\_\_

V \_\_\_\_\_ a \_\_\_\_\_ V \_\_\_\_\_ a \_\_\_\_\_

VV \_\_\_\_\_ a \_\_\_\_\_ a \_\_\_\_\_

VVV \_\_\_\_\_ a \_\_\_\_\_ a \_\_\_\_\_ a \_\_\_\_\_

V a a a a a a a a

<sup>1</sup> Vowels are frequently placed at the extreme left of a line to show that vocalization begins immediately upon exhalation. The refinement is here disregarded.

CHART 2

V Λ V V Λ Λ

V (3) Λ V V (3) Λ (3) Λ

V a V a a

V a a a a a

V e V e e

V e e e e

V a e

V a e a e

V a (3) e

V(3) a e a e a

V a e i o u

V a e i o u (3) a o i

V a u<sub>(r)</sub> a

V a e i o u i o e a

**CHART 3**

V\_\_\_\_\_h\_\_\_\_\_

V\_\_\_\_\_h\_\_\_\_\_ (r)\_\_\_\_\_ha\_\_\_\_\_

V\_h\_ha\_h\_ha\_h\_ha\_h\_ha

V\_\_\_\_\_ha\_\_\_\_\_

V\_ha\_ha\_ha\_ha\_ha\_ha\_ha\_ha

V\_\_\_\_\_ha\_\_\_\_\_ (3)\_\_\_\_\_a\_\_\_\_\_

V\_ha\_a\_ha\_a\_ha\_a\_ha\_a

V\_\_\_\_\_a\_\_\_\_\_

V\_a\_a\_a\_a\_a\_a\_a<sup>1</sup>

V\_á\_á\_á\_á\_á\_á

<sup>1</sup> In the last line but one, the intensity of the voice increases with the size of the type. The vowels in the last line are given staccato.

CHART 4<sup>1</sup>

$V \ V \ V \ \Lambda \ \Lambda \ \Lambda \ (4) \ V \ V \ (4) \ V \ (4) \ \Lambda \ \frac{ah}{I} \ (4) \ \Lambda$   
 $(6) \ V \ V \ V \ (6) \ \frac{aw}{2} \ \frac{ah}{2} \ \frac{aw}{2} \ \frac{ah}{2} \ \Lambda$   
 $V \ (6) \ V \ (6) \ V \ (6) \ \Lambda \ (6) \ \Lambda \ (6) \ \Lambda \ V \ V \ (6) \ V \ (4) \ V$   
 $\Lambda \ (4) \ \Lambda \ (6) \ \frac{ah}{I} \ (4) \ V \ (6) \ V \ V \ (6) \ \Lambda \ (4) \ \Lambda \ (4) \ \Lambda \ \frac{ah}{I}$   
 $V \ \frac{ah}{4} \ (4) \ \frac{aw}{4} \ (4) \ \frac{o}{4} \ (4) \ \Lambda \ V \ \frac{ah}{2} \ \frac{oo}{2} \ \frac{aw}{2}$   
 $\frac{oo}{2} \ \frac{o}{2} \ \frac{oo}{2} \ V \ \frac{e}{2} \ \frac{oo}{2} \ \frac{u}{2} \ \frac{oo}{2} \ \Lambda$   
 $V \ (4) \ V \ (6) \ V \ (6) \ \frac{ah}{4} \ (6) \ \frac{aw}{4} \ (6) \ \frac{oo}{4} \ \Lambda$   
 $V \ (6) \ V \ (4) \ V \ (6) \ \frac{\Lambda}{2} \ (6) \ \frac{ah}{2} \ (6) \ \frac{\Lambda}{2} \ \frac{aw}{2} \ (6) \ \frac{ah}{4} \ \Lambda$

These drill-charts may be rendered more complex by various additional "refinements" and "improvements." Some are complicated by musical notes,

<sup>1</sup> In this chart, the figures below the horizontal lines indicate the number of seconds for which the vowels are to be prolonged.

inflection-signs, intensity-signs, etc.; and others by interpolated remarks directing the pupil to repeat certain parts of the exercise, and to breathe at particular points in a particular manner. At one point the exercise may require chest breathing, at another costal breathing, and so on. As in the respiratory exercises, the time is measured by a metronome, or is given by an instructor leading the class with a baton.

At this point it may be well for us to consider the virtues of these exercises.

It may be said of vocal exercises in general that most of them are useful as ordinary elocutionary measures; and that the majority of them would be beneficial to the stammerer in some respects. But the exercises are usually of benefit for their psychological effect rather than for their elocutionary value. The exercises exert a favorable influence through suggestion when the stammerer has confidence in their therapeutic power; and for a time, at least, they may remove such secondary causes as fear, bewilderment, and inhibitive auto-suggestion. It seems probable that the vocal exercises, when practised several hours a day, may intensify the stammerer's auditory imagery, and thus exert a beneficial influence on speech. But if an intensification of the imagery occurs, it is temporary; and the improvement in speech is usually lost when the exercises are discontinued. Probably some of the vocal exercises influence the kinæsthetic

imagery. Vocal exercises in general (or more properly, perhaps, a knowledge of the vocal processes) may tend in some degree to counteract physical stammering.

As for the individual exercises themselves, it is evident that any form of practice producing gross movements of the larynx might lead to the establishment of a particular form of kinæsthetic imagery. It is questionable, though, whether a marked intensity of just this particular form of imagery would be of any great benefit to the stammerer. The acoustic impressions associated with these vocal exercises might, of course, lead to a temporary intensification of the acoustic images.—Practice of the direct and indirect attack might strengthen the motor images of delicate laryngeal movements, and in this manner prove beneficial. The practice of the indirect attack might prove useful in cases where physical stammering takes the form of a vigorous closure of the glottis. On the other hand, the practice of the glottis-stroke would probably intensify physical stammering in such instances. — The various exercises for producing the “click of the glottis” should influence the motor images, and could of course be applied with advantage in particular cases. — The exercises involving change of pitch probably influence the acoustic imagery beneficially; thus they might effect a temporary improvement in speech. — The inflection-exercises may of course affect both



the kinæsthetic and auditory imagery in some degree.—The practice of shouting or declaiming in a loud voice would be quite likely to influence the acoustic images.—Most of the general vocal exercises probably have little virtue other than their ability to intensify the auditory imagery for a period, and to exert a temporary “moral” influence. The whispered exercises may be dismissed as “fillers” — likewise the dumb-bell exercises, marching exercises, etc. The various highly elaborated exercises are merely monstrosities.

So much for the exercises intended to cure stammering by rendering the vocal organs pliable and subordinate to the will.

We shall consider now the various related measures that are supposed to obviate stammering when applied during actual speech.

An expedient that has been popular for more than half a century is that of talking in a low-pitched voice. This expedient is quite prevalent in Europe, but is encountered only occasionally in America. The argument usually advanced in support of the measure is that a low-pitched voice requires relaxation and separation of the vocal cords, and that while the vocal cords are relaxed and separated, “throat-constriction” and “spasms” are less likely to supervene. The additional plea is sometimes adduced

that a relaxed condition of the cords makes necessary a stronger expiratory stream, and that the stronger expiratory stream prevents spastic occlusion of the glottis.

All of which arguments would have been more or less sound if it had first been shown that spasmodic closure of the glottis was the cause of stammering. Lowering the pitch, like any other subterfuge, may be effective for a time if the stammerer has confidence in the procedure. And, like any other subterfuge, it may, as a novelty, hold the stammerer's attention during speech, and thus tend to eliminate bewilderment consequent upon the search for synonyms. Like any other unnatural subterfuge, then, it may effect an ephemeral mitigation of stammering.

A somewhat similar measure is that of beginning the sentence in an unusually quiet voice. This seems to be strictly a German innovation. The purpose of the procedure is apparently to preclude the unnatural effort that usually accompanies physical stammering. This seems, however, to be a rather indirect means of obtaining an estimable end. There is, moreover, always the danger that the first few words of the sentence will be lost to the hearer.

A shift that is sometimes recommended as an antidote for stammering is speaking in a whisper. The stammerer is advised to speak habitually in a whisper, to speak difficult words in a whisper, to

speaking those sentences in a whisper in which difficult words occur, and so on. The theory is that, since the vocal cords are not closely approximated during whispered utterance, there must be less danger of the glottis undergoing spastic closure. The argument, of course, is just as sound as the premises. It is true that stammering is often temporarily alleviated by recourse to whispering, just as it may be temporarily alleviated by any other unnatural measure that inspires confidence. The expedient operates by inhibiting secondary causes. But whispering is not usually efficacious, and it is seldom efficacious for any considerable period; hence, even if the measure were practicable, it would have to be condemned on purely empirical grounds.

Another specific for stammering is speaking in a monotone. One argument in support of the procedure is that by avoiding rising inflection the stammerer avoids a close approximation of the vocal cords, and thus reduces the risk of sudden closure of the glottis. Another argument is that inflection itself is difficult for the stammerer owing to his "deficient control" of the vocal cords.<sup>1</sup> In many institutions the pupils are required to drawl their words monotonously for

<sup>1</sup> One authority on elocution says: "These inflections are extremely difficult to many. In the case of stammerers, they are sometimes the only stumbling-blocks in their way, as is proved by the absence of stammering in singing."

several weeks at the beginning of the course of training. Occasionally the practice and application of the drawl is the entire system of a stammering-school. — There is practically nothing that can be said in favor of the expedient.

In contrast to the above measure we have one that consists in using the entire range of the voice ("giving the voice full play," etc.). Inflection is here the remedy for the defect instead of the cause of it. In reality, of course, it is neither.

A measure often advocated to counteract closure of the glottis and failure of the voice is maintaining vocalization throughout the sentence. The idea is that the stammerer's difficulty lies in starting voice, and that with the voice once started he has only to "keep it going" in order to avoid stammering. Accordingly the stammerer is admonished to "Keep on the voice," to "Keep the voice pouring," to "Maintain continuity of sound," etc.

As a matter of fact, vocalization is interrupted at every surd consonant, and "continuity of voice" is a myth. Nevertheless, the endeavor to maintain continuity seems to be extremely salutary, and the measure in question is one of the most efficacious to be found among elocutionary resources.<sup>1</sup> The explanation for this fact is undoubtedly that continuity of speech involves continuity of thought; and that

<sup>1</sup> The measure is nearly a century old.

continuity of verbal thought necessarily excludes multiple thought — one of the most potent of the secondary causes of stammering. We have, in addition, the usual explanation that a measure expected to be efficacious will, for a time, eliminate fear and inhibitive suggestion.—In some institutions the pupils are taught to maintain continuity of voice in a manner that does not involve continuity of verbal thought, and in such instances the virtue of the expedient is lost. The pupil is instructed to introduce a protracted *ě* into the sentence if he should anticipate trouble with a particular word — and in this way to preserve continuity of voice while preparing to attack the difficulty. But, when this procedure is permitted, a search for synonyms frequently ensues, and stammering results or the *ě* becomes the principal feature of the sentence.

Arnott's expedient for beginning sound was to prefix a short *e* (as in *berry*) to the first word of the sentence (*ě*—the sentence being spoken in this manner). The function of the introductory vowel was to open the glottis and initiate voice, which was then maintained in "continuity." This device, with its numerous variations, has become quite prominent in the "therapy" of stammering. A more recent version of the formula requires the prefixion of the short *e* to every word in a sentence, or to every word beginning with a consonant. Occasionally its pre-

fixion is recommended only for those words that afford the stammerer difficulty. Another adaptation requires the stammerer to interpolate indefinite vowels between double and triple consonants (*se-teed*, *se-te-reet*, etc.). With this recommendation the possibilities are nearly exhausted. Needless to say, the device in question is pernicious if applied in any manner.

A variant of the above measure, designed likewise to open the glottis and initiate voice, consists in prefixing the sound of the letter *n* to the initial word or to difficult words in a sentence (N-one swallow does not make n-spring, n-nor yet one fine n-day; etc.). This ruse is already three-quarters of a century old. A more recent invention supplants *n* by *m*, the *n* having apparently been found ineffectual. The *m*-prefix is (or *was* for a while) a feature of a "psychological" system that was recently introduced from Germany into England. These *n*- and *m*-prefixes are undoubtedly even more malignant than the "indefinite *z*."

Another expedient for opening the glottis consists in prefixing an aspirate (usually represented as "inaudible") to the first word or to difficult words in a sentence. It is evident that this measure is practically the "indirect attack." The observance of the indirect attack undoubtedly precludes certain vicious forms of physical stammering; but it can, of course, have no effect upon the amnesia.

The direct attack (under such sobriquets as "voice-accumulation," "shock of the glottis," etc.) is at times advocated as a sort of general remedy for stammering. It is usually a general aggravant — at least of the physical manifestations of the defect.

Two diabolical stratagems are occasionally recommended to the stammerer for opening the troublesome glottis. One consists in inhaling before every word in the sentence, and the other consists in throwing back the head with every word that occasions difficulty. Comment on these measures is unnecessary.

## CHAPTER IV

### ARTICULATION

Numerous investigators of abnormal speech have come to the conclusion that stammering is wholly or partially induced by misuse or lack of control of the articulative organs :

"The neglect of muscular activity which is displayed by the majority of speakers and singers, the laziness with which they open their mouths and use the lips and tongue is one cause of stammering, and the obstacle which prevents the words of singers, preachers, and public speakers being heard distinctly. . . .

"Some stammer with an empty lung, some with a full one. Some cannot regulate the action of the lips through weakness of the facial muscles, while others are unable to govern the motions of the tongue." <sup>1</sup>

"In all forms and varieties of the disorder the essential condition present is *spasm* of a greater or lesser degree; which necessarily implies deranged nerve-function. . . .

"The spasm may occur at the various stop-points of the vocal tube; — if at the lips, labial dyslalia is produced; — when at the point of the tongue, the dental sounds are affected; — if at the back of the tongue, guttural dyslalia results; — and

<sup>1</sup> Helmore, "Speakers, Singers, and Stammerers," pp. 40, 58.



(rarely) at the larynx, when the glottis being affected, phonation itself becomes impeded.

"By the continuance of any of these forms of spasm, a spasmodic habit is acquired, which becoming more or less automatic in course of time, passes more and more from under the control of the will, and eventually produces confirmed dyslalia; perhaps by the vicious automatism of some nerve-centre not yet located, which may preside over the coördination of the movements of speech alone."<sup>1</sup>

"The most frequent cause of stammering is the imperfect education or training of the organs of articulation, and a deficiency in that sympathetic association which ought to subsist between the articulating and vocal organs."<sup>2</sup>

"Far more serious than any of the elementary defects hitherto noticed are those affections of speech which create an impediment to utterance. These are known by the names of stuttering, stammering, spasmodic hesitation, etc. Their common characteristic is involuntary action of the organs, which are not obedient to the will. In stuttering, the articulating organs — the lips and tongue — rebound again and again before the sequent vowel can find egress."<sup>3</sup>

"If the contraction stops at the glottis, only the vowels are hindered; but if it extends, as it usually does, to the lips and the tongue, the consonants also are affected."<sup>4</sup>

"The seat of the former affection, stammering, is chiefly at the larynx, or the back part of the mouth; the latter, stutter-

<sup>1</sup> Potter, "Speech and its Defects," pp. 76-77.

<sup>2</sup> Bishop, "On Articulate Sounds; and on the Causes and Cure of Impediments of Speech," p. 67.

<sup>3</sup> Alexander Melville Bell, "The Faults of Speech," 5th ed., p. 9.

<sup>4</sup> Thorpe, "Speech-Hesitation," p. 30.

ing, which is a defective mode of expressing sounds, is situated more anteriorly.”<sup>1</sup>

When the cause of stammering is considered to be misuse or lack of control of the articulative organs, the corrective training usually consists of exercises for strengthening the speech-muscles and rendering them subservient to the will, and of practice in articulating the various refractory consonants. We shall examine first the exercises intended to produce muscular control and development.

Labial exercises are considered to be important. Says one writer on the subject:

“I spoke of gaining flexibility of the lips; this is more important than at first sight is apparent. I say, then, let the stammerer or stutterer endeavor to gain full control over the lip muscles; let him train them to flexibility combined with strength, for they are potent engines in the whole machinery of speech. When I speak of training of the lips, I use no exaggeration of speech, for lips are, after all, muscles, and almost as capable of development as the biceps of a rowing man, and they are infinitely more sensitive than the most splendid biceps which led a crew to victory on the silver Thames.”

We give below, a number of labial exercises, which are taken from various sources:

Pronounce the vowels *ē, ā, ah, aw, ō, ōō*. Pronounce the series alternately rapidly and slowly.

<sup>1</sup> Abbots, “Stammering, Stuttering and Other Speech Affections,” p. 22.

## 60      SYSTEMS OF TREATING STAMMERING

Pronounce *z-ss-z-ss-z-ss*, etc., exaggerating the lateral retraction and the protrusion of the lips.

Moisten the lips. Protrude the lower lip slightly, and draw it over the upper lip. Now withdraw the lower lip to its normal position; protrude the upper lip and draw it over the lower one. Let these movements alternate both rapidly and slowly. Keep the lips continually in contact.

Practise reading different passages without movement of the lower jaw. Keep the teeth continually in contact and exaggerate the labial speech-movements.

"Attempt to move them [the lips] *singly*; for instance, draw the under lip downward without allowing the upper lip to move, and vice versa. Produce a tone, hold it a while, and make the same movements of the lips. He who has mastered the muscles of the lips singly, can let them rest when they are not to act."

"1. Open the mouth wide, giving it its fullest extent longitudinally.

"2. Do the same, extending it laterally.

"3. From one position to the other.

"4. Half open the mouth, as in No. 1.

"5. Half open the mouth, as in No. 2.

"6. Pout the lips, making a somewhat large orifice.

"7. Do the same with a small orifice.

"8. Close the lips, and let them remain closed without pressure.

"9. Open and close them thus.

"10. Close them with pressure.

"11. Open and close them thus.

"12. Do the same as No. 10, with the cheeks puffed out.

"13. Open and close them thus.

"14. Blow through the lips.

"15. Blow through the lips with the cheeks puffed out.

- " 16. Blow through the pouted lips.
- " 17. From exercise 1 to 6 and 7.
- " 18. From exercises 6 and 7 to 1.
- " 19. From exercise 2 to 6 and 7.
- " 20. From exercises 6 and 7 to 2.
- " 21. With the teeth apart draw up the lower lip between them.
- " 22. Do the same with the upper lip.
- " 23. The same, drawing in both lips."

Exercises similar to the following are sometimes recommended for the lower jaw :

- " 1. Drop the jaw.
  - " 2. Protrude it.
  - " 3. Draw it back.
  - " 4. Move it to the right.
  - " 5. Move it to the left.
  - " 6. Go from one to the other of the above exercises."
- "Sing and hold a tone, moving the lower jaw (without any pressure upon the larynx) horizontally to right and left, and then describe a slightly circling movement. The object of this is to free the muscles used in chewing."

Lingual exercises are also popular in a number of stammering-schools. We quote the following typical exercises from Guttman's "Gymnastics of the Voice,"<sup>1</sup> a manual that has been widely followed by "speech specialists."

<sup>1</sup> "Gymnastics of the Voice for Song and Speech; also a Method for the Cure of Stuttering and Stammering," 3d ed., pp. 83 ff.

## 62      SYSTEMS OF TREATING STAMMERING

### "EXERCISE I

"Open the mouth wide, but not too wide (this is meant for all exercises); let the tongue rest quietly without any pressure flat on the bottom of the oral cavity, the point touching but not pressing the front teeth; breathe lightly in and out *through the mouth* (four, six times), not allowing the tongue to move in the very least.

### "EXERCISE II

"Protrude the tongue as far as possible without any pressure and independent of the muscles of the larynx; keep it out four seconds, then draw it back as far as possible. Keep it back four seconds without closing the mouth. Begin slowly (six times), growing faster by degrees (ten, fifteen times in succession). Protrude the tongue during expiration, draw it back during a deep inspiration through the mouth, the nostrils held closed by thumb and fore finger.

### "EXERCISE III

"Open the mouth wide, move the tip of the pointed tongue to the corners of the mouth *alternately* to the right and left (six times), *having the direct intention to strike the corners* (for purposeless work is only a mechanical action and will not lead to success); then growing faster by degrees (ten, fifteen times in succession). Do not hold the breath during this exercise, but *breathe quietly and regularly through the mouth*.

### "EXERCISE IV

"Open the mouth wide, touch with the tip of the sharply-pointed tongue the middle of the upper and of the lower lip alternately; begin slowly, *with the direct intention of letting only the outermost tip, not the entire front part of the tongue,*

touch the middle of the lips (six times), then growing faster (ten, fifteen times).

“EXERCISE V

“Open the mouth wide, place the tip of the pointed tongue into one corner of the mouth, proceed with sharply-pointed tongue in dotting fashion along the upper lip to the other corner; then on the under lip to the starting point; repeat the same movement backward to the starting point.

“EXERCISE VI

“Open the mouth wide, touch with the tip of the very sharply-pointed tongue the roots of the upper middle incisors, as if to make a dot there, and then, *touching the palate in such dotting fashion* with the tip of the tongue, proceed back as far as possible; then go forward again, always breathing through the mouth (inspiration while the tongue goes back, expiration while it goes forward, six times), both ways.

“EXERCISE VII

“Touch, in the same manner, the bottom of the oral cavity, backward and forward.

“EXERCISE VIII

“Open the mouth wide, touch with the tip of the sharply-pointed tongue the *middle* of the *upper* lip, then of the lower lip, and, without pausing, the right and left corners of the mouth (ten, twelve times), slowly at first, growing faster by degrees, alternating thus: upper middle, lower middle, right corner, left corner, upper middle, lower middle, left corner, right corner, always with the sharply-pointed tongue.


**"EXERCISE IX**

"Open the mouth wide, touch with the tip of the sharply-pointed tongue the middle of the right side of the upper lip, then that of the left side of the upper lip; first slowly (six times), then faster (six times), without any movement of the lower jaw.

**"EXERCISE X**

"Repeat the same exercise with the lower lip, without movement of the lower jaw.

**"EXERCISE XI**

"Combine these two exercises in the following manner: Begin at the upper right side, proceed to the lower left, thence to the upper left and then to the lower right, so that this figure  would be produced; at first slowly (six times), then faster (six times).

**"EXERCISE XII**

"Open the mouth wide; proceed with the tip of the sharply-pointed tongue from the right to the left, brushing the upper lip and passing along the lower lip back to the right without interruption (six times), slowly; then (six times), growing faster by degrees; repeat from the left to the right in the same manner.

**"EXERCISE XIII**

"Repeat the same exercise along the inner side of the lips. During this exercise touch the lips sharply with the tip of the tongue. Do not open the mouth too wide here.

**"EXERCISE XIV**

"Repeat the same exercise along the outer side of the lips.

"Let it be borne in mind that the purpose of these exercises

is to sharpen the tongue, and that they must be faithfully performed.

"EXERCISE XV

"Protrude the root of the lowered tongue without allowing its tip to pass beyond the front teeth (ten, twelve times).

"EXERCISE XVI

"Sing a tone (*ah*), holding it as long as possible, without allowing it to lose its clear character, and at the same time try to make a circling movement with the tip of the tongue; and later, when this exercise has been fully mastered, try to make a horizontal movement with the tip of the tongue from one side of the mouth to the other, first slowly and then gradually increasing in rapidity."

The following exercises are culled from sundry sources :

Protrude the tongue, and with the point describe a number of circles. Reverse the direction of the movement.

Repeat this exercise with the tip of the tongue in the plane of the lips.

Repeat the exercise with the point of the tongue retracted as far as possible.

Place the point of the tongue at the base of the upper incisors; carry the point back to the soft palate, and if possible to the uvula, keeping the tongue continually in contact with the roof of the mouth. Carry the tongue forward to the teeth; back to the uvula; and so on.

Protrude the tongue as far as possible; raise it till it is in contact with the upper lip; lower it till it is in contact with the under lip. Alternate these movements.

Thrust the tongue into the vestibule between the upper



teeth and upper lip; into the vestibule between the lower teeth and lower lip. Alternate these movements.

Groove the tongue by raising the lateral edges. Flatten the tongue; groove it; flatten it; and so on.

Groove the tongue. While the tongue is in this position, raise the point so that it forms a wall continuous with sides of the tongue; lower the point of the tongue to its former position; raise it; lower it; and so on.

Protrude the tongue; compress it laterally; flatten it; compress it; etc.

Depress the back of the tongue as far as possible; raise the back of the tongue till it is in contact with the posterior part of the hard palate; depress it; raise it; etc.

Groove the tongue; twist the whole tongue to the right, so that the groove is lateral; twist to the left; etc.

Repeat *la-la-la-la*; *na-na-na-na*; etc.

Trill the lingual *r*.

Many of these tongue-exercises are quite difficult; consequently the pupil is sometimes advised to assist himself at first, where practicable, with a spatula. He is often recommended to practise the exercises for a time before a mirror.

Exercises for the velum, or soft palate, are now and then encountered. The following exercises, from three different sources, are typical:

Prefix a continuous *m* to words beginning with the consonant *b*; e.g. *m-Bristol*, *m-Boston*. Note the sudden rise of the velum with the change from *m* to *b*. Practise the *m-b* combination on such words as *timber*, *amber*, *ember*, etc.

Prefix *n* to words beginning with *d*; e.g. *n-Dover*, *n-Derby*.

Note the rise of the velum with the change from *n* to *d*. Practise the *n-d* combination on such words as *hinder*, *winder*, *sunder*, etc.

Prefix *b* (without actually dislodging this consonant) to words beginning with *m*; e.g. *b-Mannheim*, *b-Maine*. Note the lowering of the velum with the change from *b* to *m*. Practise the *b-m* combination on such words as *submerge*, *submarine*, etc.

Prefix *d* (without actually dislodging the consonant) to words beginning with *n*; e.g. *d-Norfolk*, *d-Newport*. Note the lowering of the velum with the change from *d* to *n*. Practise the *d-n* combination on such words as *sadness*, *boldness*, etc.

Endeavor to raise and lower the velum consciously.

Vocalize the vowel *ah*. Nasalize it by lowering the velum; raise and lower the velum alternately. — Similarly with other vowels.

Open the mouth. Inhale and exhale quietly through the mouth with the velum raised. With the mouth still open, lower the velum and inhale and exhale through the nose.

Most of these different exercises for the articulative organs are doubtless of value as ordinary elocutionary measures. The jaw-exercises, however, are probably dispensable, and the soft palate exercises valuable only when there is a tendency to nasality. These two groups of exercises are certainly not germane to the treatment of stammering. — Labial exercises do not mitigate stammering by facilitating articulation. It is possible for them to enhance the severity of physical stammering by increasing the strength of the labial muscles. It seems not improbable, however, that the employment of these exercises might intensify

the kinæsthetic images of labial movements, and thus lead indirectly to greater definiteness of the motor images of the lip-movements associated with the production of vowels. If this should occur, the exercises might prove beneficial if employed purposefully and with discretion. The practice of reading with closed jaws would be likely to inculcate a pernicious habit; hence, should certainly be tabooed. — The tongue-exercises might prove valuable in improving one's consciousness of lingual movements and in intensifying the kinæsthetic imagery. They should prove valuable to the stammerer that is endeavoring to supplement his auditory images of vowels by kinæsthetic images of the movements by which the vowels are produced. As the lingual exercises are employed at present — to facilitate the production of "refractory consonants" — they are certainly useless.

We come now to the various exercises in articulation — represented occasionally as furnishing drill for the articulative organs, but usually as affording "practice" in the formation of consonants.

We give below, a number of articulatory exercises, all of which are in use in different stammering-schools:

Prefix each of the consonants of the alphabet (excepting *c* and *x*) to each of the vowels, *a*, *e*, *i*, *o*, *u*.<sup>1</sup> Thus:

<sup>1</sup> For other vowel-series employed, see footnote on p. 42.

<sup>1</sup> bā-bē-bī-bō-bū  
 da-de-di-do-du  
 fa-fe-fi-fo-fu  
 ga-ge-gi-go-gu  
 ha-he-hi-ho-hu  
 ja-je-ji-jo-ju  
 ka-ke-ki-ko-ku  
 la-le-li-lo-lu  
 ma-me-mi-mo-mu  
 na-ne-ni-no-nu  
 pa-pe-pi-po-pu  
 qua-que-qui-quo-quu  
 ra-re-ri-ro-ru  
 sa-se-si-so-su  
 ta-te-ti-to-tu  
 va-ve-vi-vo-vu  
 wa-we-wi-wo-wu  
 ya-ye-yi-yo-yu  
 za-ze-zi-zo-zu

Postfix each of the consonants of the alphabet (excepting *c, h, w, x, and y*) to each of the vowels *a, e, i, o, u*. Thus :

āb-ēb-īb-ōb-ūb  
 ad-ed-id-od-ud  
 af-ef-if-of-uf  
 ag-eg-ig-og-ug  
 aj-ej-ij-oj-uj  
 ak-ek-ik-ok-uk  
 al-el-il-ol-ul  
 am-em-im-om-um  
 an-en-in-on-un  
 ap-ep-ip-op-up

<sup>1</sup> Inspiration is supposed to occur at the beginning of each line.

## 70 SYSTEMS OF TREATING STAMMERING

aq-eq-iq-oq-<sup>1</sup>  
 ar-er-ir-or-ur  
 as-es-is-os-us  
 at-et-it-ot-ut  
 av-ev-iv-ov-uv  
 az-ez-iz-oz-uz

Prefix each of the consonants of the alphabet (excepting *c* and *x*) to each of the syllables of the preceding exercise. Thus for the first consonant, *b*:

bāb-bēb-bīb-bōb-būb  
 bad-bed-bid-bod-bud  
 baf-bef-bif-bof-buf  
 bag-beg-big-bog-bug  
 baj-bej-bij-boj-buj  
 bak-bek-bik-bok-buk  
 bal-bel-bil-bol-bul  
 bam-bem-bim-bom-bum  
 ban-ben-bin-bon-bun  
 bap-bep-bip-bop-bup  
 baq-beq-biq-boq-buq  
 bar-ber-bir-bor-bur  
 bas-bes-bis-bos-bus  
 bat-bet-bit-bot-but  
 bav-bev-biv-bov-buv  
 baz-bez-biz-boz-buz

(Repeat the exercise, replacing *b* by each of the other consonants in turn.)

Repeat the exercise, prefixing instead of the simple consonants the following consonantal combinations:

"Bl. . . . as in blade	Fr. . . . as in fright
Br. . . . . bride	Fy. . . . . few

<sup>1</sup> In these exercises *q* of course takes the sound of *kw*.

Bw.....	buoy	Vy.....	view
By.....	beauty	Thr.....	three
Pl.....	place	Thw.....	thwart
Pr.....	price	Thy.....	thews
Py.....	pure	Sl.....	sleep
Dr.....	draw	Sm.....	smile
Dzh.....	jew	Sn.....	snarl
Dw.....	dwel	Sf.....	sphere
Dy.....	due	Sp.....	spy
Tr.....	try	St.....	sty
Tsh.....	chain	Sk.....	sky
Tw.....	twelve	Sw.....	sway
Ty.....	tune	Sy.....	sue
Gl.....	glad	Shr.....	shrink
Gr.....	great	Spl.....	spleen
Gw.....	guelph	Spr.....	spring
Gy.....	gewgaw	Spy.....	spume
Kl.....	climb	Str.....	straw
Kr.....	crime	Sty.....	stew
Kw.....	quite	Skl.....	sclerotic
Ky.....	cure	Skr.....	screw
My.....	muse	Skw.....	squint
Ny.....	new	Sky.....	skewer"
Fi.....	flight		

Practise the following series of *physiological* consonants (giving the consonants their sounds, not their names):

b-bb-bbb-bbbb-bbbbbb<sup>1</sup>  
d-dd-ddd-dddd-ddddd  
f-ff-fff-ffff-fffff  
g-gg-ggg-gggg-ggggg  
h-hh-hhh-hhhh-hhhhh

<sup>1</sup> A dash indicates a brief pause.

j-jj-jjj-jjjj-jjjjj  
 k-kk-kkk-kkkk-kkkkk  
 l-ll-lll-llll-lllll  
 m-mm-mmm-mmmm-mmmmm  
 n-nn-nnn-nnnn-nnnnn  
 p-pp-ppp-pppp-ppppp  
 q-qq-qqq-qqqq-qqqqq  
 r-rr-rrr-rrrr-rrrrr  
 s-s-s-s-s-s-s-s-s-s  
 t-tt-ttt-tttt-ttttt  
 v-vv-vvv-vvvv-vvvvv  
 w-ww-www-wwww-wwwww  
 y-yy-yyy-yyyy-yyyyy  
 z-zz-zzz-zzzz-zzzzz

Practise the following combinations of consonants, giving the consonants their sounds — not their names :

“p-t t-p p-t-p t-p-t p-t-t-p t-p-p-t  
 p-k k-p p-k-p k-p-k p-k-k-p k-p-p-k  
 t-k k-t t-k-t k-t-k t-k-k-t k-t-t-k  
 p-t-k p-k-t t-p-k t-k-p k-p-t k-t-p  
 p-f f-p p-f-p f-p-f p-f-f-p f-p-p-f  
 f-wh wh-f f-wh-f wh-f-wh f-wh-wh-f wh-f-f-wh  
 p-f-wh p-wh-f f-p-wh f-wh-p wh-p-f wh-f-p  
 f-th th-f f-th-f th-f-th f-th-th-f th-f-f-th  
 f-th-wh f-wh-th th-f-wh th-wh-f wh-f-th wh-th-f  
 th-s s-th th-s-th s-th-s th-s-s-th s-th-th-s  
 th-sh sh-th th-sh-th sh-th-sh th-sh-sh-th sh-th-th-sh  
 s-sh sh-s s-sh-s sh-s-sh s-sh-sh-s sh-s-s-sh  
 th-s-sh th-sh-s s-th-sh s-sh-th sh-s-th sh-th-s  
 b-d d-b b-d-b d-b-d b-d-d-b d-b-b-d  
 b-g g-b b-g-b g-b-g b-g-g-b g-b-b-g  
 d-g g-d d-g-d g-d-g d-g-g-d g-d-d-g

b-d-g b-g-d d-b-g d-g-b g-b-d g-d-b  
 b-v v-b b-v-b v-b-v b-v-v-b v-b-b-v  
 b-w w-b b-w-b w-b-w b-w-w-b w-b-b-w  
 b-v-w b-w-v v-b-w v-w-b w-b-v w-v-b  
 v-w w-v v-w-v w-v-w v-w-w-v w-v-v-w  
 v-m m-v v-m-v m-v-m v-m-m-v m-v-v-m  
 w-m m-w w-m-w m-w-m w-m-m-w m-w-w-m  
 v-w-m v-m-w w-v-m w-m-v m-v-w m-w-v  
 v-th th-v v-th-v th-v-th v-th-th-v th-v-v-th  
 th-z z-th th-z-th z-th-z th-z-z-th z-th-th-z  
 v-th-z v-z-th th-z-v th-v-z z-v-th z-th-v  
 th-l l-th th-l-th l-th-l th-l-l-th l-th-th-l  
 v-th-l v-l-th th-v-l th-l-v l-v-th l-th-v  
 th-zh zh-th th-zh-th zh-th-zh th-zh-zh-th zh-th-th-zh  
 z-zh zh-z z-zh-z zh-z-zh z-zh-zh-z zh-z-z-zh  
 z-th-zh z-zh-th th-z-zh th-zh-z zh-z-th zh-th-z  
 z-r r-z z-r-z r-z-r z-r-r-z r-z-z-r  
 r-l l-r r-l-r l-r-l r-l-l-r l-r-r-l  
 r-n n-r r-n-r n-r-n r-n-n-r n-r-r-n  
 n-l l-n n-l-n l-n-l n-l-l-n l-n-n-l  
 r-l-n r-n-l l-r-n l-n-r n-r-l n-l-r  
 n-m m-n n-m-n m-n-m n-m-m-n m-n-n-m  
 n-ng ng-n n-ng-n ng-n-ng n-ng-ng-n ng-n-n-ng  
 m-ng ng-m m-ng-m ng-m-ng m-ng-ng-m ng-m-m-ng  
 n-m-ng n-ng-m m-n-ng m-ng-n ng-n-m ng-m-n  
 y-zh zh-y y-zh-y zh-y-zh y-zh-zh-y zh-y-y-zh  
 y-w w-y y-w-y w-y-w y-w-w-y w-y-y-w"

Repeat the above combinations with a vowel subjoined to each of the articulative elements; thus :

pata tapa patapa tapata patatapa tapapata  
 paka kapa pakapa kapaka pakakapa kapapaka  
 taka kata takata kataka takakata katataka



## 74 SYSTEMS OF TREATING STAMMERING

pataka pakata tapaka takapa kapata katapa  
pafa fapa pafapa fapafa pafafapa fapapafa, etc.

Repeat the combinations with a vowel prefixed to each of the articulative elements, thus :

apat atap apatap atapat apatatap atapapat  
apak akap apakap akapak apakakap akapapak  
atak akat atakat akatak atakakat akatatak  
apatak apakat atapak atakap akapat akatap  
apaf afap apafap afapaf apafafap afapapaf, etc.

Practice the following consonants and combinations with the vowel *a* (*ah*). Take breath at the beginning of each line.<sup>1</sup>

"ha— <sup>2</sup>	a—b	a—ba	ba—	ha—d
a—d	a—da	da—	ha—f	a—f
a—fa	fa—	ha—p	a—p	a—pa
pa—	pa—	pa—	ha—t	a—t
a—ta	ta—	ha—g	a—g	a—ga
ga—	ha—k	a—k	a—ka	ka—
ha—sh	a—sh	a—sha	sha—	ha—s
a—s	a—sa	sa—	ha—st	a—st
a—sta	sta—	ja—	ha—l	a—l
a—la	la—	a—bla	bla—	a—gla
gla—	a—kla	kla—	a—fla	fla—
a—shla	shla—	ha—m	a—m	a—ma
ma—	ma—	ma—	a—sha	shma—
ha—n	a—n	a—na	na—	a—shna
shna—	ha—r	a—r	a—bra	bra—
a—tra	tra—	a—shra	shra—	ha—w
a—w	a—wa	wa—	a—qua	qua—
ha—z	a—z	a—za	za—	a—zwa"

<sup>1</sup> The author of the exercise recommends practice before a mirror.

<sup>2</sup> The horizontal line here indicates prolongation of the vowel.

Practise the above consonants with all the different vowels and diphthongs.

Practise the following consonantal combinations; likewise all other possible combinations, which need not necessarily occur in words. "A gymnastic of the organs is the object here in view."

"b, d, hb, hbd, f, p, bf, ph, hfp, t, ft, g, gd, k, kt, pl, tk, bdg, ptk, sh, fsh, shp, s, ts, shps, st, hst, ks, bst, j, l, bl, dl, hl, gl, gls, lsh, shl, pl, kl, klg, glsh, m, hm, mb, mt, fm, km, lm, shlm, shms, flm, n, bn, dn, hn, fn, pn, tn, kn, gn, shn, sb, sd, hs, sm, r, br, tr, shnr, shmr, w, qu, shwr, z, x."

Practise the following combinations of consonants and vowels. Inhale at the beginning of each line, and hold the breath for a moment before vocalizing.

"ah-bah-ah-pah.  
ah-vah-ah-fah.  
ah-jah-ah-chah.  
ah-mah-ah-nah.  
ah-sah-ah-thah-ah-zah.  
ah-rah-ah-lah-ah.  
ah-dah-ah-tah-ah-dah.  
ah-gah-ah-kah.  
ah-brah-ah-bree-ah-bray-ah-broh-ah-bru.  
ah-prah-ah-pree-ah-pray-ah-proh-ah-pru.  
ay-drah-ay-dree-ay-dray-ay-droh-ay-dru.  
ay-trah-ay-tree-ay-tray-ay-troh-ay-tru.  
ee-grah-ee-gree-ee-gray-ee-groh-ee-gru.  
ee-crah-ee-cree-ee-cray-ee-croh-ee-cru.  
oh-vrah-oh-vree-oh-vray-oh-vroh-oh-vru.  
oh-frah-oh-free-oh-fray-oh-froh-oh-fru.

## 76      SYSTEMS OF TREATING STAMMERING

ah-blah-ah-blee-ah-blav-ah-bloh-ah-blu.  
 ah-plah-ah-plee-ah-play-ah-ploh-ah-plu.  
 ah-flah-ah-flee-ah-flay-ah-floh-ah-flu.  
 ah-vlah-ah-vlee-ah-vlay-ah-vloh-ah-vlu.  
 ah-clah-ah-clee-ah-clay-ah-cloh-ah-clu."

"Repeat 'ta' over and over, hundreds of times."

"The same way, repeat 'tdln, tdln, tdln!'"

"Making syllables of these with the vowels, in order, repeat those syllables over and over, as in the following tables:

Table 1

ta-te-ti-to-tu  
 da-de-di-do-du  
 la-le-li-lo-lu  
 na-ne-ni-no-nu

Table 2

ta-da-la-na  
 te-de-le-ne  
 ti-di-li-ni  
 to-do-lo-no  
 tu-du-lu-nu "

"Next, place 'ta' before the letters of the alphabet, and repeat them, over and over, as 'ta-a, ta-b, ta-c, ta-d, ta-e, ta-f,' etc.

"Place 'ta' before each word, going over whole pages in a reader suited to the student's advancement."

Repeat the last two exercises, saying "ya" instead of "ta," and "pressing the tongue hard to place."

We give on the following pages a few charts typical of those generally used with articulatory exercises. The charts are from four different sources. The symbols have been converted to conform to those previously employed.

Exercises of this kind are practically numberless.

## CHART 1

V	ābā	ēbē	ībī	ōbō	ūbū
V	ada	ede	idi	odo	udu
V	afa	efe	ifi	ofu	ufu
V	aga	ege	igi	ogo	ugu
V	aha	ehe	ihi	oho	uhu
V	aja	eje	iji	ojo	uju
V	aka	eke	iki	oko	uku
V	ala	ele	ili	olo	ulu
V	ama	eme	imi	omo	umu
V	ana	ene	ini	ono	unu
V	apa	epe	ipi	opo	upu
V	aqua	eque	iqui	oquo	uquu
V	ara	ere	iri	oro	uru
V	asa	ese	isi	oso	usu
V	ata	ete	iti	oto	utu
V	ava	eve	ivi	ovo	uvu
V	awa	ewe	iwi	owo	uwu
V	aya	eye	iyi	oyo	uyu
V	aza	eze	izi	ozo	uzu

**CHART 2<sup>1</sup>**

V	ba	ba	ba	ba	ba
V	be	be	be	be	be
V	bi	bi	bi	bi	bi
V	bo	bo	bo	bo	bo
V	bu	bu	bu	bu	bu

**CHART 3**

V(1)	a	a	a	a
V(1)	pa	pa	pa	pa
V	a	o	u	e-i
V	pa	po	pu	pe-pi

<sup>1</sup> The intensity of the voice increases with the size of the type.

CHART 4<sup>1</sup>

V  $\frac{mah}{4}$   $\frac{bah}{4}$   $\frac{pah}{4}$   $\wedge$  V (4) V  $\frac{mah}{4}$  (4)  $\frac{bah}{4}$  (4)  $\frac{pah}{4}$   $\wedge$

V  $\frac{mah}{4}$   $\frac{bah}{4}$   $\frac{pah}{4}$   $\wedge$  V  $\frac{mah}{4}$   $\frac{bah}{4}$   $\frac{pah}{4}$   $\wedge$  V  $\frac{mah}{4}$   $\frac{bah}{4}$   $\frac{pah}{4}$   $\wedge$  V  $\frac{mah}{4}$   $\frac{bah}{4}$   $\frac{pah}{4}$   $\wedge$

V  $\frac{me}{2}$   $\frac{ma}{2}$   $\frac{mah}{2}$   $\frac{maw}{2}$  V mo moo mu mi  $\wedge$

V me ma mah maw V mo moo mu mi

V me ma mah maw V be ba bah baw

V be ba bah baw V pe pa pah paw

V be ba bah baw bo boo bi

V pe pa pah paw po poo pi

V moy boy poy V may bay pay V my by py  $\wedge$

<sup>1</sup> See pp. 11, 37, and 47 for explanation of symbols.

One French institution alone boasts more than three hundred of these articulatory and vocal drills. The examples given will suffice, however, to illustrate the general nature of the articulation-practice usually prescribed. There are, of course, such inventions as articulatory exercises combined with dumb-bell drill and marching; but any further exercises that might be described would, on the whole, be little more than variants of those already given.

And what is it all good for?

More than half a century ago Klencke expressed himself on the matter as follows:<sup>1</sup>

"Inasmuch as nearly every stutterer has certain consonants which give him more trouble than others — for example, *d*, *t*, *n*, *b*, *p*, *m*, — I, in the beginning of my practice, prepared special exercises of the difficult consonantal combinations, such as *da*, *de*, *di*, *do*, *du*, etc.; taught him how to use tongue and lips, and kept him at this drill until he was able not only to form the consonants physically correct, but also in their proper relation and in the most varied combinations. Such a course I deemed indispensable, because I saw how many a stutterer did not fulfil the conditions necessary to the production of a consonant in connection with a vowel. He would, for example, run out the tongue when attempting to articulate *d* or *n*, or squeeze the lips tightly together in *p* or *b*. However, I have dispensed with this practice (which is given in detail in my

<sup>1</sup> "Heilung des Stotterns." Translation taken from *The Voice*, Vol. I, p. 121.

former book) altogether, for I have learned that it is not alone a waste of time, but also useless."<sup>1</sup>

The theory that stammering is due to difficulty in producing consonants is practically defunct; but the articulatory exercises still continue. These exercises have, however, absolutely no merit to justify their existence. There is only one instance in which they could be prescribed with any semblance of justification; and that is, in cases where there has occurred a distortion of the verbal imagery. But even in such cases the mechanical practice of articulation is dispensable.

There are on the market a few stratagems for circumventing particular consonants and consonantal combinations.

The initial *w*, it is advised, should be pronounced as *oo*. The word *waif* becomes *oo-aif*; *will* becomes *oo-ill*; *twine* becomes *too-ine*; *swoon* becomes *soo-oon*; etc.

The initial *y* masquerades as *ee*. *You* becomes *ee-oo*; *yard* becomes *ee-ard*; and *yawn* becomes *ee-awn*.

Initial *r*, when regenerated, becomes *er*. *Rats* are *er-ats*, and *rot* is *er-ot*.

*Q*, of course, must be thought of as *kw*. Forthwith the difficulty vanishes.

<sup>1</sup> After discarding articulation-exercises Klencke directed his attention to the production of *voice*.



Regarding *bl, cl, sl, spl, sm, sn, sp, spr*, and similar combinations, we are told that "when these are difficult to stammerers, it is only because they look so." Separate the consonants, and trouble is annihilated.

Concerning these expedients the following may be said: *W, y*, and *q* require the same positions as *oo, ee*, and *kw*; therefore it is a little inconsistent of the speech-mechanicians to propose the "substitution." If the endeavor to substitute ever proves beneficial, it does so by focussing the attention of the speaker on the verbal imagery. — In replacing *r* by *er* one is merely resorting to Arnott's trick (p. 54), but making its application specific rather than general. — The suggestion that the stammerer disjoin double and triple consonants is manifestly an inanity. — All of these methods induce unnatural speech or unnatural verbal thought, and therefore would be open to reprobation even though they should prove temporarily effective.

The antidote usually recommended for difficulty in articulation is a knowledge of the physiology of the speech-organs and the mechanical action by which the various consonants are produced. The following citations, from three different authors, present the point of view:

"Again we repeat, but in other words, the nature of the Stammerer's undertaking. He has to take his speech to pieces,

as a watchmaker does a watch, and examine all the cogs, and pins, and pivots, of its mechanism; then, having discovered and corrected the defects of the separate parts of the machine, he must proceed carefully to replace them, *one by one*, in natural order, adjusting each to easy action before he passes to the next! Such precisely is the curative process; it is not a tedious one, for the elements of speech are few and definite in number, but though it were irksome, perseverance would sooner or later bring it to an end! And the Stammerer will then not only have his speech machine in order, and free from obstructions and irregularities, but under superior control, from his intimate acquaintance with its structure and modes of action."

And thus the second author:

"A person who has acquired the habit of stammering has to begin again, like a little child, from the point from which he strayed. Unlike a child, however, instead of learning by imitation or intuition, he has to be told exactly how and where to place the tongue and lips."

The third author writes in dialogue:

"Let me see your mouth; sit down and open it, please. (He [the patient] does so.) Well, it is an excellent mouth. Put out your tongue. (He does so.) An excellent tongue; neither too large nor too small. You've lost a tooth or two; but you've plenty left, and all the front ones regular and in place. Move your jaws well; they work easily enough, no need of oiling the hinges, eh? (He laughs.) Move your lips, opening and closing them with a noise. (He does so, making the sound of the letter *p*.) Well, that's all right, and yet I dare say you *fancy* you can't say "*puff*" because it begins with

## 84 SYSTEMS OF TREATING STAMMERING

a p. Why, it is preposterous. There's no more reason, physically, why you should hesitate on a word beginning with p or any other letter than I should: it is all fancy."

"He smiles a melancholy smile, and shakes his head sadly.

"How long have you had this fancy? Now don't be in a hurry to speak, but recollect first, and then answer."

"A pause of a few seconds: after a gasp or two, he at length blurts out with an explosion of sound:

"Nine years."

"Nine years, eh? Now do you know the reason why you *don't* say the word *nine* clearly at once, without boggle or hesitation? Not why you *can't* say it, mind, but why you *don't*? (He shakes his head.) Well, I'll tell you, and prove to you that you can say *nine*, or any other word beginning with n, as well and as easily as I or any other man living, *if you set about it rightly*. Now, then: shut your teeth close together, opening your lips at the same time. (He does so.) Now put your tongue against the roof of your mouth, just above your upper teeth, and *keeping teeth closed*, and *lips open*, and *tongue in that position*. Utter any other sound but that of n if you can."

"He does so, and tries to utter a sound, and produces, of necessity, a repetition of the sub-tonic n, n, n.

"Very well! Now you see that it is not that you cannot utter n, but that *if you take the right means* for the utterance of the sound of the letter *you cannot say anything else*."

"He opens his mouth and tries to say 'No.'

"Ha!" I say, 'you cannot say "no" with a mouth wide open; you *can't begin to say it*, because the sound of n in *no* requires closed teeth, or nearly so. Go back to your former closed teeth and open *lips* and say *no*, at once, and without hesitation.'

"A pause, and he does so, and laughs with satisfaction.

“ ‘Ha! there! You see you can say *no* as easily as I do, and you fancied it was a dreadful stumbling-block. My dear fellow, you have no defect at all; you only *fancy* you have. You try to attain the utterance of a certain sound by an utterly false and contrary process to the one required to produce it. You might as well attempt to smoke with your mouth wide open; you have first to close your lips to draw the cigar.’ ”

“Thus, I take him in turn through every elementary sound in the language — *tonic, sub-tonic, atonic*, as Dr. Rush has classed them — showing him the organic process necessary for the utterance of each, and forcing him to observe it in practice, and thus proving to him, by his own success that, *under the required conditions, he could utter no other sound than the sound required.*”

Instruction in the mechanical processes by which the various elemental sounds are produced is usually preceded by some description of the anatomy of the speech-organs. The physical structure of the organs is often taught from anatomical models. The exposition on the physiology of speech is generally about as follows:

Inspiration is effected through the expansion of the chest. Since “Nature abhors a vacuum,” air enters the lungs, which then fill the cavity that would otherwise have resulted. Expiration is effected through contraction of the chest, the contraction resulting in expulsion of the breath. As the breath passes through the larynx, or voice-box (a conspicuous part of which is seen as the “Adam’s apple”), it sets into vibration the vocal cords, a pair of elastic membranous folds within the larynx, and thereby initiates *voice*. The raising or lowering of the pitch

of the voice is brought about by an increase or decrease in the tension of the vocal cords, this increase or decrease in tension being effected through muscular action. The voice is given the characteristic quality of different vowels through changes in shape of the buccal cavity, these changes being effected by alterations in the position of the lips and alterations in the shape and position of the tongue. The consonants are formed by different obstructions presented to the vocalized or non-vocalized expiratory current.<sup>1</sup>

This elucidation of the general physiological processes of speech is followed by detailed instruction concerning the manner in which the individual consonants are produced. The stammerer then produces them himself, and afterward practises them for months or years, as the case may be, with the different articulatory exercises. Needless to say, he is counselled to form the consonants at all times according to directions.

The directions are typically as follows :

To produce the consonant *p*, press the lips firmly together, raise the velum in order to separate the nasal cavity from the pharynx, and compress the air in the buccal cavity by the action of the respiratory muscles ; now separate the lips (by the action of the labial muscles and the downward movement of the lower jaw), and the consonant is formed by the emission of the breath under pressure.

To form *b*, proceed as above, but vocalize the breath a moment before dislodging the consonant.

<sup>1</sup> A detailed exposition on the physiology of speech can, of course, be found in almost any good book on phonetics or elocution.

To form the consonant *m*, press the lips together, lower the soft palate slightly in order to connect the pharynx with the nares (but do not lower the velum sufficiently to bring it in contact with the tongue); then vocalize the breath (which will find egress through the nares), and finally displace the consonant by separating the lips.

To produce *wh* (as in *what*), protrude the lips slightly, and round them to diminish the size of the labial orifice; raise the velum, and emit the breath rather forcefully through the mouth so that a fricative sound is produced at the lips: complete the articulation by sharply separating and retracting the lips.

To produce *w*, proceed as for *wh*, but vocalize the effluent current.

To produce the consonant *f*, bring the lower lip against the upper incisors, and slightly raise the upper lip; raise the velum, and exhale the breath with sufficient force to occasion a fricative sound at the lips: complete the articulation by lowering the jaw and sharply separating the lip from the upper teeth.

To form *v*, proceed as for *f*, but vocalize the outgoing current.

To form *t*, apply the entire edge of the tongue to the roof of the mouth; raise the velum, and compress the air in the pharynx and cavity of the mouth above the tongue; articulate the consonant by abruptly separating the tongue from the palate.

To produce *d*, proceed similarly, but vocalize the breath a moment before articulating the consonant.

To produce *n*, place the entire edge of the tongue against the palate as for *t* or *d*; lower the velum slightly (but not to the back of the tongue), and vocalize the breath, which will pass through the nares: articulate the consonant by sharply withdrawing the tongue from the palate.

To form *s*, appose the tongue to the roof of the mouth with the lateral portions well in contact, but with the middle of the

## 88      SYSTEMS OF TREATING STAMMERING

tongue slightly grooved; raise the velum, and emit the breath with sufficient force to produce a sibilant at the forward part of the tongue: finish the articulation by lowering the jaw and withdrawing the tongue from the palate.

To form *z*, proceed as for *s*, but vocalize the breath.

To produce *sh*, proceed as for *s*, but retract the point of the tongue slightly, enlarge the concavity of the tongue, and slightly arch its posterior portion.

To produce *zh*, vocalize *sh*.

To form *ch* (as in *church*) combine *t* with *sh*.

To form *j*, compound *d* and *zh*.

To produce *th* (as in *thigh*) place the tip of the tongue in contact with the edge of the upper incisors; raise the velum, and exhale with sufficient force to induce a fricative sound as the breath passes over the lateral edges of the fore part of the tongue: complete the articulation by depressing the lower jaw and separating the tongue from the teeth.

To produce *TH* (as in *thy*) proceed as above, but vocalize the breath.

To form the consonant *l*, place the tip of the tongue in contact with the palatal arch; raise the velum; emit and vocalize the breath, which will pass over the lateral edges of the posterior part of the tongue: complete the consonant by separating the tongue from the palate.

To produce *r*, upturn slightly the tip of the tongue, and place the lateral edges of the tongue lightly in contact with the palate; raise the velum; emit and vocalize the breath, which will vibrate the tip of the tongue: finish the articulation by lowering the jaw and withdrawing the tongue from the palate.

To form *y*, raise the body of the tongue till its lateral edges are in contact with the palate and bicuspid teeth; raise the velum; emit and vocalize the breath, which will pass through

the constricted space above the tongue: to complete the articulation lower the jaw and bring the tongue sharply away from the palate.

To produce *k*, apply the posterior part of the tongue to the roof of the mouth; raise the velum, and compress the air in the pharynx: articulate the consonant by sharply withdrawing the tongue from the palate.

To produce *g*, proceed as for *k*, but vocalize the breath just before dislodging the consonant.

To produce the consonant *h*, emit the breath with sufficient force to produce an aspirate sound in the glottis.<sup>1</sup>

In some institutions much ado is made of this study of the consonants. Further, the consonants are usually carefully and scientifically classified as *closed* and *continuous*; *hard* and *soft*; *subtonic* and *atonic*; *labial*, *lingual*, and *guttural*; *vocal*, *semi-vocal* and *mute*; etc. — according to the particular fancy or prejudice of, or particular book in the possession of, the particular “professor” in charge of the institution.

And what is the value of this analysis of the consonants?

Nothing!

The analysis is usually faulty, for even phoneticians are by no means agreed among themselves as to the manner in which some of the speech-elements are produced. The principiations given above, though

<sup>1</sup> All of these directions are, of course, for *initial* consonants. — Initial *c* has the value of *s* or *k*. *Q* is equivalent to *kw*.



in accord with the theories of a number of able phoneticians, are open to all kinds of criticism. The surd *th*, for instance, is sometimes formed with the tip of the tongue not in contact with incisor teeth, and the breath then passes over the tip of the tongue as well as over the anterior lateral edges. The aspirate sound of *h*, when this consonant is followed by long *e* or *u* (as in *heat* and *huge*), is usually formed in the forward part of the mouth as well as in the glottis. *G* when followed by *l* (as in *glass*) is sometimes formed with the lateral edges of the tongue. *T* when followed by *l* (as in *little*) is always formed with the lateral edges of the tongue. *T* when followed by *n* (in such words as *mutton*) is formed with the soft palate; etc., etc. But even if the analysis of the consonants were correct, a knowledge of the formative processes would be useless, for the stammerer's difficulty lies with the vowels.

A knowledge of the minor anatomy of the speech-organs is likewise valueless. It is not an asset for the stammerer to know that the *levator labii superioris alaeque nasi* assists in raising the upper lip. A general knowledge of the physiology of speech may deter the stammerer from endeavoring to speak with occluded glottis and deflated lungs; but a detailed knowledge is likely to divert his attention from his verbal imagery to the organs on which this imagery should act.

In some institutions the pupils are given instruction (usually cursory, and unfortunately frequently inaccurate) concerning the physiological production of the vowels. This feature of instruction is rarely met with; but it is one of importance, and must therefore be included in the present review.

We give below, the lingual and labial conformations corresponding to the different vowels as these conformations are usually taught by instructors of the deaf:<sup>1</sup>

*Ah* as in *far*: The tongue lies flat and inactive in the bottom of the mouth; or the whole tongue may be slightly but evenly depressed. The corners of the mouth are slightly retracted. The velum is raised, separating the pharynx from the nares (this is the case with all English vowels).<sup>2</sup>

*Ō* as in *not*: The tongue occupies the same position as for *ah*. The lips are slightly rounded.

*Aw* as in *awl*, *maul*, etc.: Position of the tongue as above. The lips are still more rounded, and the labial orifice much reduced.

*Ū* as in *but*: The body of the tongue is slightly higher than in the position occupied for *ah*; the back of the tongue may be slightly raised. The mouth is well open; there is no rounding of the lips.

*Ē* as in *her*: The fore part of the tongue rises slightly from

<sup>1</sup> The elevation of the larynx is determined largely by the position of the tongue, and hence need not be considered in the present connection.

<sup>2</sup> For French and Portuguese "nasal" vowels the velum is lowered, and the vocal stream divides, finding egress through the nares as well as through the mouth.

the position occupied for *ʌ*. The lips are often somewhat rounded.

*ŌŌ* as in *mood*: The back of the tongue is raised almost to the soft palate. The lips are rounded and protruded, the labial orifice being extremely small.

*ŌŌ* as in *hook*: The back of the tongue is lowered slightly from the position for *ōō*. The labial orifice is slightly larger.

*Ā* as in *an*: The fore part of the tongue is in its lowest position; the back is high. The mouth is well open, and there is no rounding of the lips.

*Ē* as in *met*: The fore part of the tongue is raised slightly from the position occupied for *ɛ* (the lower jaw rising with the tongue). There is no rounding of the lips; on the contrary, the corners of the mouth are often slightly retracted.

*Ī* as in *bit*: The front of the tongue is raised from its position for *ɛ*, and is very near the hard palate; the lateral edges of the tongue may be in contact with the upper bicuspid. The lower jaw, of course, rises with the tongue. The corners of the mouth are slightly retracted.

*Ē* as in *feel*: The fore part of the tongue is almost in contact with the hard palate (the lateral edges of the tongue may actually touch the palate). The corners of the mouth are retracted.

*Ō* as in *so*: The back of the tongue is high, the fore part low. The lips are somewhat rounded when vocalization begins. As the vowel is enunciated, the labial orifice is reduced to the position occupied for *ōō*. — The vowel *ō* is a diphthong, with the first element a monophthong intermediate between *ʌ* and *aw* and with the second element *ōō*. Like all diphthongs, the vowel is a glide from one monophthong to another, rather than a sequence of two pure monophthongal elements.

*Ī* as in *might*: This vowel is a diphthong composed of the elements *ah* and *ɛ*.

*Ā* as in *may*: A diphthong composed of the elements *ē* and *ɛ*.

*Oi* as in *oil*: A diphthong composed of the elements *aw* and *ɛ*.

*Ow* as in *now*: A diphthong composed of the elements *ah* and *ōō*.

*Ū* as in *due*: A diphthong composed of the elements *ē* and *ōō*.

These vowel-positions are not in accord with those given by all authorities. This must necessarily be the case, since authorities differ somewhat among themselves. Their differences of opinion, however, are not significant. Where one phonetician gives the "low back" position for a certain vowel, another may give "mid back." Usually either position will give the vowel with considerable purity. There can be no absolute scale of lingual positions, for these differ somewhat in individuals with the height and shape of the palate. And further, there is no absolute standard of *vowel-qualities*: these differ in different localities, and with different persons in the same locality.

"The solution of the difficulty seems to be that suggested by Ellis, namely, that, 'what we call our vowels are not individuals, scarcely species, but rather genera, existing roughly in the speaker's intention, but at present mainly artificially constituted by the habits of writing and reading.'"<sup>1</sup>

The value of instruction in vowel-formation depends, of course, upon the nature of the instruction and the manner in which it is given.

<sup>1</sup> Alexander Graham Bell, "Mechanism of Speech," pp. 128-129.

The instruction is sometimes of such a nature as to be practically worthless regardless of the manner. There is, for example, a stammering-school that uses Helmore's analysis of the vowels, in which the shape of the labial orifice alone is considered.<sup>1</sup> Instruction of such a nature is virtually wasted.

Then with regard to the manner: It is certain that the most accurate instruction is worthless when it results merely in the student's acquiring so much abstract information. It does not benefit the stammerer to know that *e* is formed with the fore part of the tongue high in the mouth, if he is not able to visualize or mentally feel the appropriate position or action in his verbal imagery. The abstract knowledge may be interesting, but it does not counterbalance the amnesia.

In a few institutions the pupils are required to practise the different consonants and vowels before a mirror. This procedure is usually recommended for giving the pupil a better "knowledge" of the action of the speech-organs. Actual visualizing of the movements is rarely recommended to stammerers even by teachers of the deaf and dumb. We believe, however, that if the stammerer could accurately visualize the movements necessary to produce

<sup>1</sup> See Helmore, "Speakers, Singers, and Stammerers."

the words he wishes to utter, stammering from auditory amnesia would not occur. — These visual images are no doubt very difficult to acquire. The problem on hand is not a simple one; but it merits thorough investigation.

## CHAPTER V

### VERBAL EXERCISES, MODES OF ENUNCIATION, ETC.

VERBAL exercises occur in such bewildering multiplicity that it seems almost idle to attempt to correlate them. Almost every institution employing respiratory, vocal, and articulatory "gymnastics" has its own particular set of graduated word- and speech-exercises that require an application of the principles enjoined, and afford practice in so-called "natural" speech. In addition to these exercises there are many that introduce special and supposedly beneficial modes of utterance. These latter exercises may or may not be associated with the respiratory, vocal, and articulatory training already mentioned.—It will probably be well to examine first those exercises that do not necessarily introduce new modes of utterance, *i.e.* the exercises that form a natural sequel to the various forms of vocal and articulatory practice already considered; and to examine afterward the various special modes of enunciation and the special exercises on which these modes of enunciation are practised.

The first group of exercises represents the work of no one particular institution; it is a composite group

## DIAGRAMS FOR PHYSIOLOGICAL SPELLING

m

a

n

m

a

n

m

a

n

m

a

n

m   a   n

m a n

Diagram illustrating the hierarchical structure of the syllable **tap** using the **tree model** (top-down approach):

- Level 1: **t** (dash), **a** (dash), **p** (dash)
- Level 2: **t** (dash), **a** (dash), **p** (dash)
- Level 3: **t** (dash), **a** (dash), **p** (dash)
- Level 4: **t** (dash), **a** (dash), **p** (dash)
- Level 5: **t** (dash), **a** (dash), **p** (dash)
- Level 6: **t** (dash), **a** (dash), **p** (dash)
- Level 7: **t** (dash), **a** (dash), **p** (dash)
- Level 8: **t** (dash), **a** (dash), **p** (dash)
- Level 9: **t** (dash), **a** (dash), **p** (dash)
- Level 10: **t** (dash), **a** (dash), **p** (dash)



consisting of exercises from a large number of stammering-schools.

#### WORD-EXERCISES

One of the simplest word-exercises consists in "physiological spelling" or "word synthesis." This exercise is sometimes cautiously employed in making the transition from articulatory exercises to monosyllabic reading. The exercise consists in dismembering words — usually monosyllables — into their component physiological consonants and vowels, and pronouncing these elements with a distinct pause between them. The pauses are gradually lessened, and finally omitted — when the word of course stands complete. The exercises may be diagrammed as on the preceding page.<sup>1</sup>

The next exercise to be considered is one that affords practice on simple words introducing different combinations of consonants and vowels.

The exercise is prescribed for various purposes — for affording practice on difficult consonants, practice in maintaining continuity of voice, practice in respiration, or just practice. The following charts will illustrate the procedure:<sup>2</sup>

<sup>1</sup> Symbols as in the vocal and articulatory exercises. Dotted lines appear beneath surd consonants, since these cannot be vocalized. The length of the pauses between the speech-elements is proportional to the spaces between the lines.

<sup>2</sup> Symbols as formerly employed.

CHART 1

V ----- bade	V _____ bade
V ----- beam	V _____ beam
V ----- byway	V _____ byway
V ----- both	V _____ both
V ----- bugle	V _____ bugle

CHART 2

V ----- sage	sale	saneness	sane	
V ----- sage	sale	saneness	sane	<sup>1</sup>
V ----- seek	seal	seemly	seat	
V ----- seek	seal	seemly	seat	
V ----- side	sign	sightly	size	
V ----- side	sign	sightly	size	
V ----- soak	sole	solar	sewn	
V ----- soak	sole	solar	sewn	
V ----- sue	suit	suitable	suet	
V ----- sue	suit	suitable	suet	

<sup>1</sup> The solid line representing voice should by rights be dotted at the surd consonants. This refinement is commonly disregarded.

For more advanced work, an English teacher of stammerers prescribes practice on words with variously placed primary accents. His general instructions for practice are as follows :

"1. Let every letter as well as every syllable be distinctly heard. . . .

"2. Tease out the word — tease it out.

"3. Let the voice run evenly along the words.

"The object is not only that of clear articulation, but also that of teaching the voice to play with the word. Whitefield, so it is said, could so play with the word *Mesopotamia* that he could bring tears to the eyes."

#### EXERCISE 1

"*Masticatory* — *accessariness* — *criminatory* — *customarily* — *dilatoriness* — *disciplinary* — *laboratory* — *lachrymatory* — *necessarily* — *peremptorily* — *polysyllable* — *sedentariness* — *spiritualize* — *undulatory*.

"1. Accentuate the above on the first syllable.

"2. Tease out the word — tease it out."

#### EXERCISE 2

"*Abstemiousness* — *authoritative* — *anathematize* — *confederacy* — *contemporary* — *conciliatory* — *corroborative* — *discriminative* — *exclamatory* — *ejaculatory* — *effeminacy* — *enunciative* — *extraordinary* — *elucidatory* — *hereditary* — *incendiary* — *irrefragable* — *immeasurably*.

"1. Accentuate the above on the second syllable.

"2. Tease out the word — tease it out."

EXERCISE 3

"Algebraical — ammoniacal — antipathetical — aristocratical — catechetical — consanguinity — characteristic — ceremonious — contiguity — democratical — extemporaneous — epigrammatical — enthusiastical — encyclopædia — electricity — eccentricity — extra-parochial — geographical — genealogy — genealogical — heterogeneous — hemispherical — hydrophobia — incongruity — miscellaneous — malleability — metaphysical — mythological — pertinacity — penitentiary — plenipotentiary — pusillanimity — philosophical — physiological — physiognomy — phraseology — simultaneous — systematical — superfluity — ultramontanish — unaccountable — unconstitutional — undervaluation — uniformity — universalism — universality — unsearchable.

"1. Accentuate the above words on the last syllable but two.

"2. Tease out the word — tease it out."

EXERCISE 4

"Assassination — antipestilential — academician — concatenation — circumnavigation — circumferential — contradistinction — deterioration — exaggeration — experimental — epigrammatic — epicurean — hieroglyphic — interlineation — inauguration — inefficacious — pronunciation — ratiocination — recitation — supererogation.

"1. Accentuate the above on the last syllable but one.

"2. Tease out the word — tease it out.

"N. B. — Stammerers will have no difficulty with any of the above words, if they are careful to keep the eye on the syllable in italics."

Word-exercises are of course succeeded by reading- and speech-exercises. We shall first consider

reading-exercises; though reading and speaking usually alternate in actual practice, both groups of exercises being arranged in progressive series.

### READING-EXERCISES

Reading usually begins with simple sentences, which are generally of a hortatory nature. In class-practice the pupils frequently read the sentence first in unison, and then by turns. In some institutions the pupils read in concert for several days or weeks before they begin to read individually. We give below, a number of "sentences for reading" from the repertoires of an English and an American stammering-school:

"Every one is the architect of his own fortune."

"Heaven never helps the men who will not act."

"Too low they build who build beneath the stars."

"I am sure, care's an enemy to life."

"The cautious seldom err."

"Never leave that till to-morrow which you can do to-day."

"Every one is the son of his own works."

"In this world a man must either be anvil or hammer."

"He who has lost confidence can lose nothing more."

"Courage in danger is half the battle."

"Doubt indulged soon becomes doubt realized."

"Nothing great was ever achieved without enthusiasm."

"Wisely, and slow; they stumble, that run fast."

"He only is a well-made man who has a good determination."

Etc., etc.

These simple sentences are usually followed by "selected paragraphs." In these paragraphs, respiration points are frequently indicated by symbols. We give below, a reading-exercise that is employed in a German institution:

" V TIMELY WISDOM

"V An emperor of China was once informed of the death of a horse V that he had intrusted to the special care of one of his servants. V The emperor had the unfortunate man called to him, V but was so enraged that he attempted to slay him with his own hand. V 'Ruler of the world,' cried a mandarin, as he warded off the blow, V 'Ruler of the world, would you have this man die uninformed of the enormity of his crime?' V 'Inform him,' said the emperor, still violently enraged. V 'Wretched man,' said the mandarin to the servant, V 'your offence is that a horse has died after being placed in your special care by our emperor. V That is a great crime. V You have so angered our emperor that he nearly slew you with his own hand. V That is even a worse crime. V And it will be your fault that later our emperor will lose the love of his subjects V and his good name with other nations V when they learn that he has ordered a man to be killed for the sake of a horse. V Do you realize what a criminal you are?'

" 'V Release him'; said the emperor, 'I forgive him.'"

Dialogue-reading is also employed:

*First Pupil:* "What say'st thou, noble heart?"

*Second Pupil:* "What will I do, think'st thou?"

*First Pupil:* "Why, go to bed and sleep."

*Second Pupil:* "I will incontinently drown myself." Etc., etc.

After ordinary reading-practice, a few teachers prescribe work on sentences involving difficult verbal collocations. The following sentences of this kind are typical :

“DOUBLE ARTICULATIONS

- “A figure *regal* like, with *solemn* march,  
Goes slow and stately by ; whilst *they*, distill’d  
Almost to jelly with the act of fear,  
Stand dumb, and speak not to him.  
“O ! studied *deceit* ! (not study)  
“A *sad* dangler, (not angler).  
“A *languid* dame, (not aim).  
“His *crime* moved me, (not cry).  
“To obtain *neither*, (not either).  
“He could pain *nobody*, (not pay).  
“Goodness centres in the heart, (not enters).  
“Luxurious soil, (not oil).  
“He will *prate* to anybody, (not pray).  
“*Make* clean our hearts within us, (not lean).  
“In bulk as *huge* as whom the fables name of monstrous *size*,  
(not eyes).  
“Can the Ethiopian change his skin, (not kin), or the leopard  
his spots ? (not pots).  
“Whose beard descending swept his aged breast, (not beer).  
“A constant smirk on the face, and whiffling activity of the  
body, are strong indications of *futility*, (not utility).”

“DIFFICULT COMBINATIONS

- “Yet the lark’s *shrill* *note* may come.  
“And the floors shall be full of *wheat*, and the fats shall overflow with wine and oil.  
“Behold, I will do a thing in Israel, at which both the ears  
of every one that heareth it shall tingle.

- "What though *each* spark of earth-born rapture fly !  
 "In septennial parliaments, your representatives have six  
     years for offence, and but one for atonement.  
 "Can the husbandman look forward with assured confidence  
     to the expected increase of his fields ?  
 "Now on the leafless yew it plays.  
 "Long has it hung from the cold yew's spray.  
 "Oft by that yew on the blasted field.  
 "Examples prevail when precepts fail.  
 "Frequent good company.  
 "Put *the* cut pumpkin in a pipkin.  
 "Then pealed *the* notes omnipotent to charm,  
     And the loud tocsin tolled their last alarm.  
 "My little ones kissed *me* a thousand times o'er.  
 "In praising sparing be, and blame *most* sparingly.  
 "Malice seldom wants a mark to aim at.  
 "We must not blame fortune for our faults.  
 "We must look to time past to improve what is to come."

"MISCELLANEOUS

- "Chaste stars, (not tars).  
 "Cold ground, (not coal).  
 "Irish yews, (not shoes).  
 "Yet half I see the panting spirit sigh, (not spirit's eye).  
 "Oh ! the torment of an ever-meddling memory, (not a never-meddling.)  
 "Art thou afeard to be the same in thine own act and  
     valour, as thou art in desire ? (not thy known.)  
 "A warm tear gushed, — the wintry air  
     Congealed it as it flowed away ;  
     All night it lay an ice-drop there, (not a nice drop)  
     At morn it glittered in the ray.  
 "'Give the cat stale bread.' 'The cat's tail, mamma ?' 'Silence, child !'"



## SPEECH-EXERCISES

One of the simplest speech-exercises consists in counting. We give below, an exercise that forms a conspicuous feature in the "curriculum" of an English stammering-school:

## "THE 'LONG COUNT'"

"Two hundred and twenty-two million, two hundred and twenty-two thousand, two hundred and twenty.

"Two hundred and twenty-two million, two hundred and twenty-two thousand, two hundred and twenty-one.

"Two hundred and twenty-two million, two hundred and twenty-two thousand, two hundred and twenty-two.

"Two hundred and twenty-two million, two hundred and twenty-two thousand, two hundred and twenty-three.

"Two hundred and twenty-two million, two hundred and twenty-two thousand, two hundred and twenty-four.

"Two hundred and twenty-two million, two hundred and twenty-two thousand, two hundred and twenty-five.

"Two hundred and twenty-two million, two hundred and twenty-two thousand, two hundred and twenty-six.

"Two hundred and twenty-two million, two hundred and twenty-two thousand, two hundred and twenty-seven.

"Two hundred and twenty-two million, two hundred and twenty-two thousand, two hundred and twenty-eight.

"Two hundred and twenty-two million, two hundred and twenty-two thousand, two hundred and twenty-nine."<sup>1</sup>

<sup>1</sup> From this point the exercise continues: "Three hundred and thirty-three million, three hundred and thirty-three thousand, three hundred and thirty." After "thirty-nine" is reached, the exercise proceeds: "Four hundred and forty-four million," etc.

Another exercise consists in learning passages and reciting them memoriter. Says one writer :

“As soon as possible, read aloud, and recite pieces committed to memory, first in private, next before sensible intimate friends, and at length you will be able to do so in school, college, or in public company.”

A German teacher of stammerers requires his pupils to learn and recite prose passages, and later to paraphrase them. Reading-matter is also paraphrased in this way.

Another German instructor requires his pupils to complete sentences of which he gives the introductory words. The cues are typically as follows :

“ My favorite authors are —— ”

“ My favorite book —— ”

“ The chief characters in the book —— ”

“ My general impressions of the book —— ”

“ The longest journey I ever undertook —— ”

“ My pleasantest recollections of the journey are —— ”

“ My favorite pastime is —— ”

“ Its advantages are —— ”

“ My interest in it began —— ”

“ I read in the newspaper this morning that —— ”

“ This afternoon I shall —— ”

Etc., etc.

Asking and answering questions is another popular form of practice. The pupils interrogate and reply to one another, or reply to formal questions put by the instructor. Formal questions are often pro-

pounded relative to the subject-matter in the reading-exercises. The following typical questions relate to the exercise given on page 103 :

- “ What offence had the emperor’s servant committed ? ”
- “ Who interceded on the servant’s behalf ? ”
- “ What is a mandarin ? ”
- “ Approximately, what words did the mandarin employ in addressing the emperor ? ”
- “ What was the emperor’s response ? ”
- “ With what words, approximately, did the mandarin address the servant ? ”
- “ To whom, however, was he really speaking ? ”
- “ What effect did the words have on the emperor ? ” Etc., etc.

Brief replies are usually prohibited :

“ The answer must not be a short one consisting of one word only, but must contain the whole question ; for example, if I ask, ‘ How are you to-day ? ’ the answer must not be, ‘ Well ’ ; but, ‘ I am well to-day, thank you. ’ . . . As a matter of course in these answers the slightest stoppage of speech must not be permitted, but in case there is, the sentence must be repeated until it is produced fluently.”

Defining words is another popular exercise :

“ ‘ What is a house ? ’ — ‘ A building that serves man as a dwelling. ’

“ ‘ What is a rose ? ’ — ‘ The rose is a flower noted for its beauty and scent ; it is called the queen of the flowers. ’ ”

A Belgian teacher employs questions that require the accentuation of different words in the reply. For example :

“ ‘What color is milk?’ — ‘Milk is *white*.’

“ ‘What is white?’ — ‘*Milk* is white.’

“ ‘Name five objects that are generally white.’ — ‘*Milk*, *rice*, the *lily*, the *swan*, and *plaster* are white.’ ”

In more advanced work the pupils relate anecdotes, make short speeches, describe travels, and so on.

An Austrian teacher recommends that advanced pupils be frequently interrupted by questions and requests to repeat — and that they be thus tested by any artificial difficulties the teacher is able to devise.

In most institutions the students are required to associate and converse with strangers to a considerable extent during the latter part of the training. This intercourse sometimes goes by the name of “stranger-practice.”

So much for the various unembellished exercises. It will be understood, of course, that the curriculum of no one institution embraces all of the verbal exercises described. Some systems embrace a majority of them, and others but a few; the number and nature of the exercises employed being determined by the theories of the person employing the system. Concerning the value of the exercises little need be said. There is no inherent virtue in the exercises themselves: benefit can be derived only from the principles enjoined. These principles have already been discussed. Let us assume, however,

that the measures applied are among the more rational ones — preliminary inspiration, indirect attack, "continuity" of voice, etc. — and then pass the exercises rapidly in review. — Physiological spelling can be dismissed as so much nonsense. — Word-exercises combined with breathing, whispering, and vocal exercises might be pardonable if anything could be said in favor of them. — Practising words with differently placed accents seems to be an objectless procedure. The exercise aims at nothing in particular, and doubtless accomplishes it. — The reading of ordinary matter probably furnishes as sensible an exercise as one finds in the average stammering-school. The procedure is practical, whereas most of the exercises just considered are fetishistic. — Dialogue-reading is probably beneficial; certainly it would furnish a test of the pupil's fluency. — The reading of difficult combinations of words would furnish excellent training for elocutionists, but it is difficult to see how the practice can be of any benefit to stammerers as stammerers. — Counting affords the student opportunity for applying rational principles. It is, however, an irksome business, and since it has practically no advantage over other simple speech-exercises, there is little to commend it. — Reciting memoriter, paraphrasing, completing sentences, propounding and answering questions, relating anecdotes, etc., are of course all useful and practical exercises. — The prac-

tice of creating artificial difficulties for the student by interrupting him, requesting him to repeat, and so on, is certainly a sensible procedure. Usually the student does not encounter such difficulties till the course of training is complete, and with these difficulties he is wont to encounter the customary relapse. — Intercourse with strangers should certainly occur during, rather than after, the course of speech-training. "Stranger-practice" is undoubtedly a valuable feature in any curriculum.

The usual generalizations can be applied to most of the verbal exercises. They probably intensify the pupil's acoustic imagery to some extent while he is practising them for several hours a day. Further, the pupil's confidence in the exercises temporarily absolves him from fear, bewilderment, and inhibitive auto-suggestion.

We come now to the consideration of special modes of utterance intended to mitigate or obviate stammering, and to the exercises on which these modes of utterance are practised.

We shall consider first the expedient of omitting or reducing initial consonants. More than a hundred years ago Erasmus Darwin observed<sup>1</sup> that stammering generally took the form of a "broken association" between the initial consonant and the

<sup>1</sup> "Zoonomia: or the Laws of Organic Life," London, 1800.

## 112 SYSTEMS OF TREATING STAMMERING

succeeding vowel. He therefore suggested that the stammerer omit the initial consonant in difficult words and come to the vowel immediately. The word *London* would thus be 'Ondon, and *Birmingham*, 'Irmingham. Darwin further recommended that the stammerer practise difficult words in this manner, and finally intercalate the consonants, giving them the lightest possible articulation.<sup>1</sup>

This principle of Darwin's has been incorporated in nearly every system for treating stammering that has been introduced in the last hundred years. (In many cases the system has been incorporated in the principle.) In most modern stammering-schools the pupils practise light articulation in formal exercises. The nature of the exercises employed is obvious enough. We give below, a few typical charts, which are self-explanatory :

### CHART 1

V	'ay	'ay	'ay	'ay
V	day	day	day	day
V	day	day	day	day

<sup>1</sup> Darwin also recommended preceding the word by an aspirate; thus he probably introduced the indirect attack into the therapy of stammering.

CHART 2

V	Twice	one	are	two
V	Twice	two	are	four
V	Twice	three	are	six
V	Twice	four	are	eight
V	Twice	five	are	ten
V	Twice	six	are	twelve
V	Twice	seven	are	fourteen
V	Twice	eight	are	sixteen
V	Twice	nine	are	eighteen
V	Twice	ten	are	twenty
V	Twice	eleven	are	twenty-two
V	Twice	twelve	are	twenty-four



In many institutions light articulation is enjoined not merely for initial consonants, but for all consonants that occur in a word.<sup>1</sup> The pupils practise light articulation in general reading, or in formal exercises in which directions are taken from charts. The following practice-chart is typical:

#### READING-CHART

baleful beauty binary bowsprit beautiful  
 dairy dealing diary donation dubious  
 failing feelingly frightful moment future  
 gaily greedy grimy grotesque gewgaw  
 hateful heinous higher hopeless hugely  
 jaded jejune jibing jovial jewel  
 keepsake kindness kowtow kuklux  
 lameley leaky lifelike loathful lugubrious  
 mainland meekness mightily moment musical  
 namesake negotiator ninety nomadic nuisance  
 painful peacefully piety potentiality pusillanimous  
 quaker queerer quiet quotation quook  
 radiance reasonable rider rodent ruminant  
 salience seasons slightly social suitable  
 tasteful tedious tiresomeness token tuneless  
 variegated venial vicarious vociferous viewless  
 wakefulness weekly widening woeful wooer

<sup>1</sup> In an English institution, weak articulation is prescribed for all except final consonants, these being given a sort of compensatory stress.

ʔakɪn ʔeɪst ʔɪtə ʔOkɪl ʔʊlə  
sənʔ sɛnɪθ sʔɪOnɪtə sOdɪəc sɛʊs

In an English institution the students practise "vowel-reading" for several weeks before intercalating consonants. In a German institution the students read the vowels and (physiological) consonants separately for a considerable period; then finally combine the two, giving the consonants an extremely light articulation. These reading-exercises may be diagrammed as follows:

DIAGRAM 1<sup>1</sup>

A 'i'i'a' 'ui' o' 'ie'i' i' 'e ea' a' 'i'a' o' 'e 'u'e' a' 'e'i'  
o' 'e 'ea', 'i' 'a'io' o' a' 'i' 'o 'au' a' i'u'. 'e 'ow 'i'ea'e'  
o' 'o'i' a' 'u'o'a'io' a' 'e 'o' 'a'e'ou' i' 'e'o'y, a' i' i' 'o' 'u'  
o'e'i' i' 'e 'i'; 'ou 'ay 'a' 'a'a 'o'o'e' 'e 'i'e', 'ee' 'o'o'e' 'e'  
'ee', 'o'e' o' 'u'u' 'o' 'e 'u', 'a'o'eu' 'o' 'e 'ai', 'u' 'o 'e'ei'  
o'e'e' 'e 'ea' 'u' a 'ue 'ie', 'o 'o' 'ou 'ay i'a' 'ie', 'oy',  
'ea', 'o', 'u'i'io', 'ou'e', a' 'a'oe'e' 'ie' u'o' 'e 'ea' 'o o'e'  
i', i' a 'i' o' 'i'i' 'i' o' 'o'e'io'.

DIAGRAM 2

- pr-nc-p-l fr--t -f fr--ndsh-p -s th- --s- -nd d-s-  
ch-rg- -f th- f-ln-ss -nd sw-ll-ngs -f th- h--rt, wh-ch  
p-ss--ns -f -ll k-nds d- c--s- -nd -nd-c-. W- kn--

<sup>1</sup> Absolute continuity of sound is usually maintained during vowel-reading.

d-s-s-s -f st-pp-ngs -nd s-ff-c-t-ns -r- th- m-st d-ng-r-  
 -s -n th- b-d-, -nd -t -s n-t m-ch -th-rw- s- -n th-  
 m-nd; y-- m-- t-k- s-zr- t- -p-n th- l-v-r, st-l t-  
 -p-n th- spl--n, fl-w-rs -f s-lph-r f-r th- l-ngs, c-st-r-m  
 f-r th- br--n, b-t n- r-c-pt -p-n-th th- h--rt b-t - tr-  
 fr--nd, t- wh-m y-- m-- -mp-rt gr-fs, j--s, f--rs,  
 h-p-s, s-sp-c--ns, c--ns-ls, -nd wh-ts--v-r l-th -p-n  
 th- h--rt t- -ppr-ss -t, -n - k-nd -f c-v-l shr-ft -r c-nf-s-  
 s--n.

### DIAGRAM 3

“A principal fruit of friendship is the ease and discharge of the fulness and swellings of the heart, which passions of all kinds do cause and induce. We know diseases of stoppings and suffocations are the most dangerous in the body, and it is not much otherwise in the mind; you may take saarsa to open the liver, steel to open the spleen, flowers of sulphur for the lungs, castoreum for the brain, but no receipt openeth the heart but a true friend, to whom you may impart griefs, joys, fears, hopes, suspicions, counsels, and whatsoever lieth upon the heart to oppress it, in a kind of civil shrift or confession.”

Many persons engaged in treating stammering recommend not only that the consonants be reduced, but also that the vowels be prolonged. The following paragraph on the subject is by an English writer:

“It is a well-known fact that most stammerers can sing without any difficulty. This is because in singing there is a

continuous flow of vocal tone; *the vowels predominate*, while the consonants are but very lightly touched in passing. The opposite of this takes place in speech. The vowels are passed over quickly, and *the consonants*, which are only checks, clicks, and explosive noises, *predominate*. The moral of this is obvious. Let the stammerer *exaggerate his vowels* at the *expense of his consonants*, and a good many stumbling-blocks will thereby be removed from his path."

And this by an American writer :

"In essaying longer phrases the stammerer should keep in mind and practise this rubbing or friction of tone and breath through the throat, this half-groaning sound, and try to carry it through the whole sentence without interruption, thinking persistently of the unbroken stream of outpouring breath.

"Of course, many of the consonants will momentarily check this steady flow. Such, for instance, are *k, p, t*, or *b, d, g*; but these he must slight and disregard as far as possible, thinking, not of the consonant, but of the vowel which follows it. Let him literally *drawl* the vowels, running them together as much as possible. He may, with advantage, even omit the consonants and simply drawl the vowels in one unbroken stream of groaning tone. Then let him add the consonants as lightly touched as possible, so lightly that they will be almost or quite unintelligible, gradually making them more distinct as he finds that the idea of steady drawling will not be interfered with."

Vowel-elongation is practised from charts in several German institutions. The transcription given on the following page presents a typical exercise.

In a prominent German stammering-school, the pupils make their initial attempt at reading from

## PRACTICE-CHART

V <u>ow</u> <u>ī</u>	V <u>tow</u> — <u>nahl</u> — <u>p</u>
V <u>ē</u> <u>ū</u>	V <u>e</u> — <u>nou</u> — <u>gh</u>
V <u>ă</u> <u>ē</u>	V <u>ma</u> — <u>mc</u> — <u>r</u>
V <u>ö</u> <u>ē</u>	V <u>co</u> — <u>acc</u> —
V <u>ū</u> <u>öö</u>	V <u>u</u> — <u>eru</u> — <u>l</u>
V <u>ō</u> <u>ě</u>	V <u>o</u> — <u>pc</u> — <u>n</u>
V <u>ě</u> <u>ī</u>	V <u>e</u> — <u>tchi</u> — <u>ng</u>
V <u>oi</u> <u>ě</u>	V <u>oi</u> — <u>ntmc</u> — <u>nt</u>

charts of this description. The elementary charts present sentences and phrases in which the words commence with vowels; the more advanced charts introduce initial consonants. On the opposite page appear transcriptions of two typical exercises.

The next two exercises furnish illustrations of the advanced work of another German institution:<sup>1</sup>

## "TRY AGAIN

"Dri—ve the— na—il a—ri—ght, bo—ys,  
Hi—t i—t o—n the— hea—d;

<sup>1</sup> Quoted from *The Voice*, Vol. V, pp. 4-5.

CHART 1

V	ī		ǎ		ǎ	
V	i	—	is	a	—	nds
V	ō	ū		ǎ	ī	ǎ
V	o	—	cea	ns	a	—
V	aw	ā		ā	ǎ	ū
V	a	—	way	ai	—	nd
V	ǎ	ō	ē	ī	ǎ	ě
V	a	—	n	o	—	nd

CHART 2

V	ō		ǎ		ō	
V	prO	—	s	a	—	nd
V	ā		ǎ	ō		ī
V	a	—	mā	—	n	o
V	ē	ī	ǎ	ǎ	ē	ī
V	pē	—	rai	—	stē	nce
V	ǎ	ē		ā	ē	ǎ
V	mā	—	nnē	—	rs	mā
V	aw	ū		ē	ě	ē
V	fo	—	rtll	—	ne	bē

Stri—ke wi—th a—ll you—r mi—ght, bo—ys,  
Whi—le the—i—ro—n i—s re—d.

“Whe—n you—’ve wo—rk to—do—, bo—ys,  
Do—i—t wi—th a—wi—ll;  
The—y who—rea—ch the—to—p, bo—ys,  
Fi—rst mu—st cli—mb the—hi—ll.

“Sta—ndi—ng a—t the—foo—t, bo—ys,  
Ga—zi—ng a—t the—sky—,  
Ho—w ca—n you—ge—t u—p, bo—ys,  
I—f you—ne—ve—r try—?

“Thou—gh you—stu—mble—o—ft, bo—ys,  
Ne—ve—r be—do—wnca—st;  
Try—, a—nd try— a—gai—n, bo—ys,  
You—’ll su—ccce—d a—t la—st.

“The following should be read in a similar manner:

“BENJAMIN FRANKLIN

“Benjamin Franklin, born in Boston in 1706, when a boy laid down certain rules of conduct which he always followed. He made up his mind to be temperate, orderly, frugal, and industrious. When ten years old he cut wicks for candles, minded the shop, and ran errands for his father, who was a tallow-chandler. He did not, however, neglect his books, for he tells us, ‘I do not remember when I could not read.’ Though no boy ever worked harder, he was fond of manly sports, and was an expert swimmer. Not liking the tallow-chandlery business, his father apprenticed him to a printer. This was precisely the kind of work which suited Franklin. When hardly eighteen years old, he was sent to England to buy printing material, and to improve himself in his trade. As a printer in Lon-

don, a very young man, entirely his own master, with no friends to control him, surrounded by temptations, those rules which he had fixed upon early in life were of singular benefit to him. Returning to America in 1726, in time he opened a modest printing-house in Philadelphia. Industry, honesty, and good work made him successful. He became member of the Assembly, postmaster, and during the Revolution, while in France, induced that country to espouse our cause. If to-day the world has to thank Americans for making electricity their servant, Benjamin Franklin first discovered its most marked qualities. With a kite he brought down the spark from heaven to earth, and held it under control. Franklin died, honored by all his countrymen, in 1790.

"When a lad, hungry and tired, he landed in Philadelphia with a dollar in his pocket, he bought some bread, and marched through the streets munching his crust. He happened to see a young lady, a Miss Read, at the door of her father's house. He made up his mind then and there that he would marry her; and so in time he did."<sup>1</sup>

<sup>1</sup> *Slow speaking* is advocated by most teachers of stammerers. This "slow speaking" usually involves lengthening the vowels and protracting the ordinary pauses.

Kingsley's oft-quoted advice is "Read and speak *SLOW*."

Another English writer declares that—

"The stammerer, if he wish to be cured, *must*, on all occasions, speak slowly and deliberately, dwelling on the *vowels*, so as to give time for forming the laryngeal sounds."

A third English writer pens the following:

"I earnestly advise all persons with impediments of speech, whether confirmed stammerers and stutterers, or only just beginning to hesitate, to be very slow and deliberate in reading and speaking, especially at first. Among the large numbers of patients whom I have had under my care for the removal of all kinds of impediments and difficulties in articulation, I have met with but very few who did not



A modern tendency in German stammering-schools is to require advanced pupils to prolong only the initial vowel of a sentence. The succeeding vowels are sometimes slightly lengthened, but they are not drawled and wailed to such an extent as formerly. The following in reference to the expedient :

"The stammerer has his greatest difficulty in speech when he begins: the trouble occurs at the beginning of sentences. It is at this point that his fear and his dread of stammering rob him of his confidence; he stammers far less in finishing the sentence. It is therefore necessary to furnish the stammerer with some expedient that will tide him over his supposed difficulties at this particular point. The expedient is this: he must accustom himself to lengthening the initial vowel as much as possible. He must no longer say 'Right is always right,' but 'Ri—ght is always right.' This method is thoroughly reliable, and the hearer will not find it in any way conspicuous or displeasing."

Exercises practically identical with the following are employed in three of the leading German stammering-schools :

habitually speak with painful rapidity, and at times almost breathless haste, until they are suddenly stopped in mid career of their impetuous speech by the impediment suddenly coming on. By a spasmodic effort, eventually they recover their power of articulation, and *rattle* on with their hurried words until they are once more arrested in the same way, in the very midst of a word, perhaps; and so they go on to the pain and distress of themselves and those whom they are addressing."

In an English stammering-school slow speaking is carried to the point where the pupils utter only one word on a breath at the beginning of treatment.

CHART 1

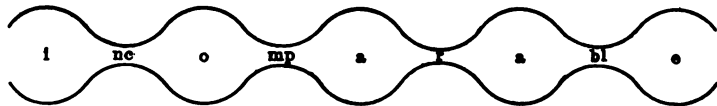
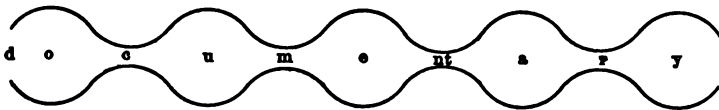
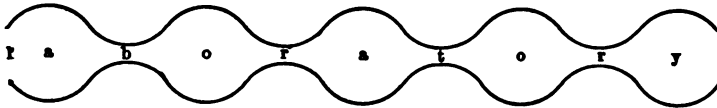
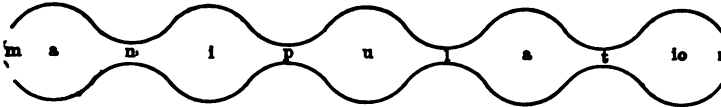
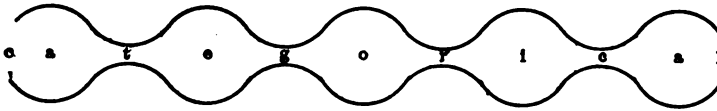
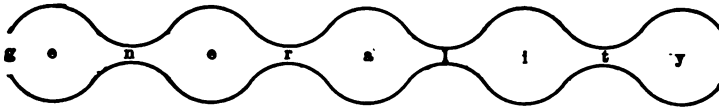
V a ———ntecedent	V boi ———sterousness
V co ———ncentration	V di ———latory
V e ———lectorship	V fi ———rmamental
V ga ———lvanic	V hi ———storically
V i ———ntensiveness	V ju ———stification
V ka ———leidoscopic	V la ———boratory
V ma ———nifestation	V nu ———gatory
V o ———ppressively	V pre ———decessor
V que ———rulously	V re ———futability
V sa ———nitariness	V tra ———pezium
V u ———biquitous	V va ———lorously
V woe ———begone	V ya ———chtmanship
V zea ———lousness	

## CHART 2

The—— king is the man who can.  
 A——ll may do what has by man been done.  
 T——o climb steep hills requires slow pace at first.  
 The—— race by vigor, not by vaunts, is won.  
 He—— who follows two hares is sure to catch neither.  
 The—— dignity of truth is lost with much protesting.  
 Me——n are but children of a larger growth.  
 La——nguages are the pedigree of nations.  
 No—— man is a hero to his valet.  
 Fo——r loan oft loses both itself and friend.  
 E——vil events from evil causes spring.  
 Who—— heeds not experience, trust him not.  
 A——ll nature is but art.  
 Three—— may keep counsel, if two be away.  
 He—— must needs go whom the devil doth drive.  
 Who—— goeth a borrowing, goeth a sorrowing.  
 Whe——re the stream runneth smoothest, the water is  
 deepest.  
 Whe——re law ends, tyranny begins.  
 He——ll is paved with good intentions.  
 I——n lapidary inscriptions a man is not upon oath.  
 I——t matters not how a man dies, but how he lives.

A slight variant of the practice of protracting the vowels must be mentioned. In some institutions the pupils are required to intensify the vowels rather than to lengthen them. In a few schools both practices are combined. The consonants are reduced or given normal force, according to the ideas of the teacher. The following are typical exercises :

CHART 1<sup>1</sup>



<sup>1</sup> In this exercise the volume of sound is supposed to increase with the distance between the lines.

CHART 2<sup>1</sup>

"Sons; because I have purchased no estate nor was born to any, I have long considered of some good legacies to bequeath you; and at last, with much care, as well as expense, have provided each of you (here they are) a new coat. Now, you are to understand, that these coats have two virtues contained in them; one is, that with good wearing, they will last you fresh and sound as long as you live: the other is, that they will grow in the same proportion with your bodies, lengthening and widening of themselves, so as to be always fit."

In criticism of these various expedients and exercises it may be said that the practice of lightly articulating the initial consonant is one of the most salutary ever introduced into the therapy of stammering. Physical stammering and light articulation are practi-

<sup>1</sup> In this exercise the volume of sound is supposed to be proportional to the size of the type.

cally incompatible; and one almost of necessity excludes the other. Pure stammering, however, cannot be directly affected by light articulation. The expedient of *omitting* the initial consonant cannot be regarded as practicable, for the omission renders speech unintelligible. Even the practice of reducing the consonant is not without its dangers, for the stammerer is frequently subjected to the embarrassment of being asked to repeat. The various exercises in light articulation probably have some slight value; but, like most exercises, they are undoubtedly overrated. The value of light articulation lies in its application, and not in the fact that it may be practised for several hours a day under the tutelage of a highly paid instructor. — A *general* diminution of the strength of the consonants seems scarcely necessary in cases where the stammerer experiences no difficulty in the middle of words. — Vowel-reading and similar exercises probably lead to an ephemeral intensification of the auditory imagery, and thus for a brief period may appear to be efficacious. — The preliminary reading of the physiological consonants is probably of no benefit to the amnesic stammerer. — The trick of elongating the vowels cannot be taken very seriously. It has some slight efficacy, since it focusses the speaker's attention on the auditory element. In resorting to the expedient, however, the subject merely exchanges his position as an intelli-

gent stammerer for that of an apparent lunatic. On the whole, the novelty of the change is not sufficient recompense for the bother involved. The various exercises involving prolongation of the vowels probably effect a transient intensification of the acoustic imagery.—The practice of prolonging the initial vowel of a sentence may prove of some slight value by focussing attention on the auditory element; but with most persons the unnatural character of the procedure would condemn it.—The practice of intensifying the vowels (with or without reduction of the consonants) leads to little more than loud talking. The loud talking *per se* cannot be regarded as remedial; yet probably some benefit is derived from the attention necessarily given to the auditory imagery. The exercises doubtless affect the imagery in the customary manner.

The expedients just described are “discovered” and marketed (with various auxiliaries) at frequent and regular intervals. A German writer recently made them the subject of a rather grandiloquent little pamphlet. This brochure of less than a hundred pages retails at thirty marks. We give about ten pfennigs’ worth in the following paragraphs.

This from the preface and introduction :

“I am positive that my book can do only good. Yes, I am sufficiently immodest to say: ‘I have rendered humanity a great service by fathoming the nature of stammering. Till

now, absolutely no one has been safe from stammering; for no one knew why he spoke normally' . . .

"After surmounting inconceivable difficulties I have penetrated the matter in such a way that nothing can refute the conclusions I have arrived at. . . .

"I am not a learned man, I am not highly accomplished and scientific; hence I am not going to write a learned book: but I shall relate and explain in what way and manner I succeeded in discovering the causes of my own frightful infirmity. Further, I shall record my observations on the manifestations of this disease, and finally I shall tell how I contrived with great energy and with the exertion of the whole strength of my body and soul to discover the way and means to cure my own infirmity, and hence also the infirmity of others. . . .

"My work (or my struggle, I might say) aims at an ideal. I am not conducting propaganda for a lucrative undertaking. The sole object that I have in view is to banish stammering from the world (*Stottern aus der Welt zu schaffen*), and to place my experience at the service of those unfortunate ones whose anguish and suffering I know and appreciate full well, since I myself have tasted all the pain and bitterness that falls to a stammerer's lot.

"Banish stammering from the world!

"Is this possible?

"It sounds like mockery when I say, 'I am in the fortunate position, as the result of experiences in my own person, as well as with my three children, — two girls and a boy, — of being able to answer the above question in the affirmative.'

"It was these terrible experiences that drove me to seek and inquire how the pain of this awful disease might be removed; and, thank God, I have found the means and the way of exterminating the malady with its roots.

"As my life's work I have undertaken to abolish stammering



from the world; and I have positive hope of accomplishing my task."

The following concerns the cause and cure of the defect:

"I explain to my pupils clearly and forcefully, by the following example, how it is that the sound of the voice is the chief thing, while letters are only secondary. I ask them the question: 'What do we need first of all in order to make a pound-cake?' The correct answer always comes, 'The dough.'

"'And what else do we need in order to bake the dough?' 'A cake-mould,' is the usual answer.

"That is right: this gives the cake its mould or form — whether round or polygonal, high or low, and so on.

"'Now what does a cake consist of?' To this question most of them answer, 'Of dough and its form.' And then I answer them sharply and abruptly, so that they are quite startled, and become confused at their position (for then they mark the circumstance, and the example impresses them more deeply) —

"'No, in order to bake a cake I need simply and solely the dough!

"'For if I should put the dough into the oven without a cake-mould, I should still have a cake — though certainly not a cake that would be pleasing to the eye. But if I put the cake-mould alone in the oven, what have I? Nothing!' The pupils now become more interested and curious; they watch each word as it falls from my lips, and they note the words carefully.

"The important thing is not *that* a stammerer is treated, but *how* he is treated.

"I continue my explanation to the pupils as follows:

"'The most important thing when one is baking a cake is the dough; *that*, one must have. We use the cake-mould

simply to give the cake its particular form.' After I have let the stammerers wonder a moment, I explain the analogy and continue: 'As with the cake, so with human speech; for speech also consists of two things — dough, which is sound or voice, and the mould, corresponding to the letters.

"Speech is made audible only through sound; but it may be heard if the sound or voice is produced only softly, or is even whispered. Now again — only the voice is the speech; letters are made audible only through sound: without sound they cannot be produced, they are merely the mould for the dough.

"But where is the sound, the voice, the audible word, to be produced? In the throat! Not with the lips!' etc. If a pupil should wish to inquire, 'How, or with what organs, is the voice, or the sound, produced,' I should answer him, 'You do not need to know that in order to be cured of your impediment.'"

Concerning his discoveries, the author writes:

"Till now I had thought in a wrong and harmful manner; I had thought of letters — consonants and vowels — that is, of mouth-positions, which cannot be spoken without voice. Now I must think in a proper and healthful manner; I must entirely disregard letters, and must attend to the voice, as I do in singing, so that the voice may not go out. . . .

"Speech is sound. Stammering is unconsciously endeavoring to speak without voice or sound. The stammerer speaks wrongly because in his fear he thinks wrongly — and therefore misuses his speech-organs.

"He must not think of letters; he must think only of voice."

"We have had many laws of speech, but they have availed nothing, for there is only one law to follow, namely: 'Produce sound voluntarily; but letters, consonants as well as vowels, involuntarily.'"

"The stammerer speaks without voice. Voice or sound is the first requisite for speech. The stammerer — who fears and stumbles over consonants — must always be accustomed to forming the vowels in a strong, resonant voice. He must perform vocal exercises, but never exercises on consonants."

Our author's discoveries are, then, that stammering is due to a failure of the voice; and that the voice goes out because the stammerer neglects to think about it. The remedies that he invents are — thinking about the voice and vocalizing strongly. (He also invents continuity of sound, and saying *ε* or *m* at the beginning of sentences.)

These same vocal secrets may be purchased in a hundred other markets. We quote this particular "dull catalogue of common things" since it is rather typical of these modern books of revelations.

The next measure that we have to consider is forceful articulation, — recommended usually as a cure for stuttering (repetitive stammering), but occasionally as a remedy for stammering in any of its phases.

One writer advises the stammerer to —

"Adopt a strong, energetic manner of reading, and not go along lazily and listlessly, as is too often the case."

Another writer avers that —

"A case of simple *Stuttering* would need little more for its removal than the cultivation of a firm articulation and clearly sonorous voice."

A third teacher recommends his pupils to practise forceful articulation with the following alliterative sentences :

"EXERCISE I

"Balmy breezes bore my bark beneath balconies and bridges, by balustrades and barges, where boys bowed becomingly to beauties; but Bill the boatman bumped the boat against the breastwork of the breakwater.

"1. Take in a long, deep breath.

"2. Say as much as possible without breathing again.

"3. Practice it till the whole can be said two or three times in one breath.

"4. Hit the *b*'s hard.

"N.B. These directions will apply to the exercises which follow.

"EXERCISE II

"Call clearly Colonel Campbell commanding a close company of Canadians to conceal the cannons, combustibles — commodities curiously cut — in a cave, covered with cactus and cucumbers, and cry 'Come, come, come.'

"EXERCISE III

"Do, Daddy, do, dance drolly and delightfully down the drawing-room with dear, dry, old, David Dandy.

"EXERCISE IV

"Fie, Fanny, fie! forfeited figs, freely forfeited, for feeble folks, should in fine fingers find first for forty-five feeble folks a full fill.

## 134    SYSTEMS OF TREATING STAMMERING

### “ EXERCISE V

“ Gaily gathered the gleaners the glossy golden grain and garnered it gladly in Granny’s great granary in Godfrey’s green grassy glen.

### “ EXERCISE VI

“ Hie, hie, Henry, for it is not the hunting that hurts the heavy horse’s heels, but the hammer, hammer, hammer, on the hard high hills.

### “ EXERCISE VII

“ John, just join Jane and jam the japanned chest of jewels which the jumping jilting Jack has judged Jockey James to have stolen behind the joists.

### “ EXERCISE VIII

“ Little lazy limping Lily Lane let a little lame lamb lie loose on the lovely lawn.

### “ EXERCISE IX

“ Marlborough managed in a most magnificent manner to mar by military manœuvres the mischievous machinations of a marvellous multitude of malicious mounted Mamelukes, mercifully and malevolently menacing his merry, merry men.

### “ EXERCISE X

“ Norman Noel named Nanny Nannely the nicest niece known to ninety-nine nephews.

### “ EXERCISE XI

“ Poor, pitiable Peter Piper ploddingly picked a peck of piercing pepper-corn; now, if poor, pitiable Peter Piper ploddingly picked a peck of piercing pepper-corn, where is the peck of piercing pepper-corn which Peter Piper picked?

"EXERCISE XII

"Quash quarrels quickly; quell quietly unqueenly queries, and giving no quarter to questions quickly quenching our queenly queen's quiet.

"EXERCISE XIII

"Ruefully, roughly, rending ragged raiment, round the rugged rocks the ragged rascals rapidly ran their truly rural races.

"EXERCISE XIV

"The squat, square, squinting sweep spluttered and squalled in the surging deep. The squire swam swiftly, and splash! The squinting sweep saved without a crash.

"EXERCISE XV

"When a twister, twisting, would twist him a twist, for twisting his twist three twists he will twist, but if one of the twists untwist from the twist, the twister, untwisting, untwists the twist.

"EXERCISE XVI

"The thought that sticks to me thoroughly through thick and thin is that that that that that young lady has just parsed is a pronoun.

"EXERCISE XVII

"Violins and violoncellos vigorously vamped with very versatile voices vociferating various strains very vehemently . vexes Valentine's violent valet.

"EXERCISE XVIII

"The zealot Zephaniah Zadkiel rode a zebra zigzag up Zeboim."<sup>1</sup>

<sup>1</sup> Alliterations are often employed for the practice of "difficult consonants." The expedient of practising "difficult consonants" and difficult words has already been discussed (Volume I, pp. 345 f.).

It need scarcely be said that little benefit would accrue to the stammerer from deliberately according to the consonants a forceful articulation. The average subject articulates far too forcibly as it is, and in most cases the practice would tend merely to enhance physical stammering. In some instances the procedure might lead to the conversion of "stuttering" (repetitive stammering) into compressive stammering; but here we should have retrogression rather than advancement. The gist of the matter is that forcible articulation can in no way mitigate pure stammering; while it can greatly aggravate physical stammering. There is therefore no argument for it, but a cogent argument against it.

A somewhat general maxim frequently commended to the stammerer is, "Take care of the consonants, and the vowels will take care of themselves." We quote the two following passages introducing the precept:

"Very few people take the trouble to find out how the consonants are made by the vocal apparatus. The whole cry is vowels, vowels, vowels. If you will take care of the consonants, the vowels will take care of themselves. You must speak with vowels, but so many disregard the consonants and think they are of no moment."

And thus the second passage:

"Read and speak SLOW; and *take care of the consonants, and the vowels will take care of themselves*" (Kingsley).

On the opposite side of the question we have the following :

“ Were a golden rule for the stammerer to be formulated, it would doubtless be: ‘ Take care of the vowels, and the consonants will take care of themselves.’ ”

This last passage unquestionably contains the more rational suggestion; but neither the maxim “ Take care of the consonants ” nor “ Take care of the vowels ” is very significant, inasmuch as both are amorphous generalities.

Kingsley, however, amplifies his advice, — “ Take care of the consonants,” — and since he is followed by many modern “ speech specialists,” it will be well to cite him in the matter :

“ And how to take care of the consonants ? By taking care of the tongue and lips.

“ Now, if you will watch any one who speaks beautifully you will see that the tongue lies quite quiet, on a level with the lower front teeth, and never flies up in the mouth. You will see also that they use their lips a great deal; and form the consonants with them. But you will see, also, that they keep the *upper* lip down and still, so that the upper front teeth are hardly seen at all; while they move the under lip a great deal, making it play upon the upper.” <sup>1</sup>

An American writer finds the remedy for stammering in a free action of both upper and lower lip :

<sup>1</sup> “ Charles Kingsley : his Letters and Memories of his Life,” Vol. II, p. 261.



## 138 SYSTEMS OF TREATING STAMMERING

"When the lips are pulled back for every word or syllable in a long word, and pushed out, in a short time the tongue comes back and goes forward, and the diaphragm and the breath work in harmony. The mind and those muscles and movements will become coördinated, confidence gained, nervousness and spasmodic action of the muscles governed and corrected."

And here we have the other side of the question:

"The lips should move only *vertically* in articulation; any lateral or horizontal motion is a blemish as well as an interference with the *expressive* power of the lips. Every modification of a vowel sound may be perfectly made *within* the mouth, aided by the mere diminution or enlargement of the labial aperture. But this does not require any looseness or projection, — far less circular pursing of the lips."

Another writer recommends keeping the lips well separated:

"He [the stammerer] must separate his lips or teeth at the very instant they touch; and their resting place must be at some distance apart."

To which another writer responds:

"Let the patient effectually conquer the bad habit which prevails so largely among those who stutter or stammer (I really think my own experience warrants me in saying in ninety-nine out of every hundred stammerers) of keeping the lips apart and the mouth open. *Nothing can be worse in every way than this bad habit*, either as regards the power of clear articulation and fluent speech, the proper condition of the lungs, or the vacant expression which it gives the countenance. I always tell all stammering pupils frankly, if I see they have this vile habit, that I can do very little, if anything, toward removing

their various impediments until they have thoroughly conquered it, and acquired the habit of always keeping the lips firmly but easily pressed together; except, of course, when reading or speaking."

The expedients of starting to speak from the "open position" and using a free action of the jaw are frequently recommended as antidotes for stammering.

Thus an American "speech specialist":

"Never forget that the other half of the stammerer's trouble comes from **closing his mouth when it should be open.**

"The mouth should **always be open at beginnings.** . . .

"Act on the principle that all lip-sounds are produced **as the lips go apart**, not while they are in contact.

"The chief mistake is to begin with the lips together, whereas **all beginnings should be made with the mouth open.**"

One of the principal remedies of an English institution consists in starting from the open position and wagging the jaw freely. The argument is that the word *nag* is a corruption of *wag*, and that a *nagging* woman *wags* her jaw excessively. The stammerer should therefore wag his jaw to acquire similar fluency in speech.

And this in condemnation of the measure:

"Then, in the matter of advising stammerers to open their mouths wide so as to allow speech to flow freely out of them, — this, in my judgment, is another decided error. As a rule, this opening of the mouth wide is the very thing stammerers are only too much in the habit of doing, and in my opinion is the very thing we should prevent them from doing. It is

when the mouth is wide open that the muscles of voice-production are mostly thrown into spasm. Your great orator and your great actor does not require to open his mouth wide to be distinctly heard, nor to prevent any possible spasms from visiting his utterance; why, then, should a stammerer act in direct defiance of the teachings of a Gladstone, a Salvini, or a Bright? The more carefully a stammerer follows the example of the best speakers, the more easy will be his path to a successful cure."

Most of these injunctions and teachings are irrelevant. The average stammerer would be hindered rather than helped by paying meticulous attention to the action of lips and jaw. Undoubtedly unimpeded labial action is preferable to labial inactivity, and a free movement of the jaw is preferable to mandibular paralysis; but here we are miles away from the cause of stammering. — There seems to be no particular reason why the stammerer should invariably open the mouth before speaking; this procedure will certainly not eliminate speech-disturbances. — It is impracticable for the speaker to open the mouth widely at every vowel: with such vowels as *ōō* and *ē* the wide position is entirely unnatural. Undoubtedly the mouth should be closed when not in action. — And when this is said, there is little more to say. The emphasis given to the subject is unwarranted.

An American "speech specialist" stands sponsor for a "method of attack" for difficult words that

consists of three expedients that we have already considered. — Explosive consonants are to be given light articulation. In stammering on such consonants as *t*, *d*, *ch*, and *j* —

“It can be seen . . . that the tongue is wedged tightly into position behind the upper teeth and is forcibly held in that position. The opposite in position naturally would suggest relaxation with little muscular effort of the organs. In other words, *take the position as lightly as possible.*”

As for the continuous consonants :

“It will be found upon trial with many of the continuous sounds that it is difficult to continue their initial sound with the mouth open, and thus this method of simply opening the mouth after having formed the sound will serve, in many cases, as a means of overcoming the difficulty.”

And respecting the vowels :

“Since vowel stammering is manifested by the contraction [closure?] of the glottis, cannot the reader see that it is always well to attack the vowel by lowering the voice [pitch?], thus separating the vocal cords and making the glottis as little liable to contraction as possible?”

Explosive consonants are practised in passages similar to the following, in which italicized consonants are lightly articulated :

“There exists in this *chec-kered* world of ours,  
As *part* of the *heri-tage* lot-*ted* to man.  
The thistle of woe and the flowers

Of hope, that *bud* and *bloom* with fra-grance rare,  
And *cheer* life's path where'er they can," etc., etc.

In the next exercise the stammerer practises opening the mouth. To direct him, the continuous consonants are printed in italics :


" ' Vo-lunteers *wanted!* Who's first, I say, to an-swer *the Na-*  
*tion's* call —  
To de-fend *the f-lag* on *fo-reign* seas with sword and can-non  
ball —  
To c-rush with *might* a *foe-man* c-ruel and a-venge our noble  
*Maine* —  
To f-ree a people long ens-laved, and rend *their* bonds in  
t-wain? '  
*Thus* spake an of-fi-cer of the Guard, his vi-sage firm and  
g-rave,  
His quiet *mien* and steady eye bespoke him t-rue and b-rave."

In the following exercise the pupil lowers the pitch at the italicized vowels :

" ' The boneless tongue, so small *and* weak,  
Can crush *and* kill,' declared the Greek.

" ' The tongue destroys *a* greater *horde*,  
The Turk asserts, ' than does the sword.'

" The Persian proverb wisely saith;  
' A lengthy tongue — *an* early death.' "

These three exercises may be combined — in which case diacritics are employed to show the pupil just which measure to resort to. An oblique line descending from left to right (  ) prescribes light articulation.

A line inclined in the other direction( / ) enjoins wide opening of the mouth. A small circle above a letter directs lowering of the pitch. A combination of these marks betokens the simultaneous application of two or three expedients. Herewith a typical exercise :

“ Is there no secret place on the face of the earth,  
Where charity dwelleth, where virtue hath birth ?  
Where bosoms in mercy and kindness shall heave,  
And the poor and the wretched shall ‘ask and receive’ ?  
Is there no place on earth where a knock from the poor  
Will bring a kind angel to open the door ?  
Ah ! search the wide world wherever you can,  
There is no open door for the moneyless man !

“ Go, look in your hall, where the chandelier’s light  
Drives off with its splendor the darkness of night,  
Where the rich hanging velvet in shadowy fold,  
Sweeps gracefully down with its trimmings of gold,  
And the mirrors of silver take up and renew,  
In long lighted vistas the wildering view —  
Go there in your patches, and find if you can,  
A welcoming smile for the moneyless man ! ”

A few European schools have similar eclectic "methods" for the "attack" of difficult words, and one or two employ diacritics in connection with verbal exercises. There is little, however, that can be said in favor of a procedure that requires the pupil to dodge about from one expedient to another. It is possible that the endeavor to select and execute the prescribed manœuvre for each particular consonant may for a time engage the pupil's attention to a sufficient extent to exclude multiple thought. On the other hand, it is equally possible and probable that the attempt to apply the system will itself induce bewilderment. With these two possibilities in mind, one can hardly accord the measure an enthusiastic indorsement. — The signal feature with these eclectic "methods" is that the various expedients from which the pupil makes his selection can in most cases be applied simultaneously. There is no reason, for instance, why the stammerer should not at all times articulate lightly, use a free movement of the jaw, and employ a reasonably low pitch. Furthermore, the arguments that apply for a particular expedient with a particular group of consonants usually apply for the same expedient with any other group of consonants. Unfortunately these systems are introduced with no clear explanation of their *raison d'être*; hence one is rather puzzled to know what it is all about.

As a means of avoiding difficult initial consonants the stammerer is sometimes recommended to run his words together, or to subjoin initial consonants to the words preceding.

The following paragraph on the subject is by the principal of an Irish stammering-school :

“ You know, perhaps, that a man’s stammering does not effect [affect] his singing at all, try it if you are not sure. Well, of course you see, that if you could say your words, as you sing them, your stammering would vanish. What then is the difference in the way you produce your words in singing, and in speaking? In speaking, you pronounce the words separately, you say one word, and then make a short pause before beginning the next. In singing you do not separate each word so entirely; there is no break in the sound between the words, you try to make the pause as short as possible, and to begin one word, immediately you have finished the preceding one. . . . You must try then to imitate this singing method in your ordinary speech.”

A German writer, after recommending prolongation of the initial vowel of a sentence, continues :

“ But the stammerer will not always succeed in connecting the succeeding sounds of the sentence easily and without a falter, for he is accustomed to regarding the initial sound of each word as a fresh beginning — whereas we speak the whole phrase that occurs between pauses as though it were a single word. Therefore one must accustom the stammerer to regarding the initial sound of each word as the final sound of the word preceding, for it is a notorious fact that final sounds never occasion difficulty.”



A third writer recommends transposition of the initial consonants, and prescribes reading-exercises in which these consonants have actually been subjoined to the words preceding. The following exercise is typical :

#### READING-EXERCISE

The distant Trojans never injur'd me.<sup>1</sup>  
Thed istantTr ojansn ever injur'dm e.

In youth and beauty wisdom is but rare.  
Iny outh andb eautyw isdom isb utr are.

For too much rest itself becomes a pain.  
Fort oom uchrr est itselfb ecomes ap ain.

Praise undeserv'd is scandal in disguise.  
Praise undeserv'd issc andal ind isguise. .

Worth makes the man, and want of it the fellow.  
Worthm akesth em an, andw ant of itth ef ellow.

Bare the mean heart that lurks behind a star.  
Bareth em eanh earthh atl urksb ehind ast ar.

Who dares think one thing, and another tell,  
My heart detests him as the gates of hell.  
Whod aresth ink oneth ing, and anothert ell,  
Myh earld etestsh im asth eg ates ofh ell.

<sup>1</sup> The sentences printed in the ordinary manner are not intended to be read. They are given for reference in case the transcribed sentences should not be intelligible.

The following is the form of a popular German exercise: <sup>1</sup>

READING-CHART

E—even the worthy Homer sometimes nods.

No—thing is stronger than custom.

Toi—I does not come to help the idle.

Pra—ctice in time becomes second nature.

E—even a single hair casts its shadow.

Po—werful indeed is the empire of habit.

Loo—k for a tough wedge for a tough log.

I—t is better to learn late than never.

Su—ccersful and fortunate crime is called virtue.

Fi—re is the test of gold; a—dversity, of strong men.

I—t will not out of the flesh that is bred in the bone.

Whe—n all candles be out, all cats be gray.

Fea—r may force a man to cast beyond the moon.

It is evident that the practice of uniting the words of a sentence into one protracted polysyllable is practically identical with that of preserving continuity of sound. It has the same argument in its favor—that it must needs involve continuity of verbal

<sup>1</sup> Initial consonants are to be “regarded” as the final consonants of the words preceding. When two similar consonants come together, only one is to be pronounced.

thought. In normal speech, however, one does not "pronounce the words separately" any more than he pronounces the individual syllables of a word separately; hence it is evident that no benefit is derived from eliminating "dividing pauses."—The procedure of deliberately transposing initial consonants has little to recommend it. When one is concerned with transposition rather than with continuity, he neglects the essential feature. Often transposition occurs and continuity is lost. Speech then becomes unintelligible even if physical stammering does not supervene.

Another remedy for stammering is proposed in *phonetic syllabication*, a measure practically the antithesis of that just described. Each syllable within a word must commence with a consonant whenever this is physically possible :

"Spoken syllables are not the same as written syllables. The latter are divisions to the eye, to show the etymology of words; the former are divisions to the ear, and are governed solely by the sound. Every syllable—even in the quickest utterance—should have a SEPARATE IMPULSE OF VOICE. But practically a large proportion of impulses are lost through vocal mismanagement.

"The elements which make up syllables are vowels and consonants. Vowels require an OPEN CHANNEL in the mouth; and consonants require a more or less complete CLOSURE of some parts of the mouth. Now, herein lies the grand principle of syllabic articulation. The direction of organic action ought in all cases to be FROM CLOSE TO OPEN; that is,

from consonant to vowel; whereas the prevailing habit among faulty speakers is to make the action from open to close; that is, from vowel to consonant. The effect is, that vowels, instead of having a free channel through the mouth, directly from the throat, are, as it were, squeezed between consonants, cut short, and often altogether lost.

"The principle of oral action — from close to open — cannot be too clearly apprehended. Its practical application dictates that any vowel between consonants should be collocated phonetically with the consonant which precedes, and not with that which follows it; and conversely, that any consonant between vowels should be collocated with the vowel which follows, and not with the vowel which precedes it. Thus:

he-te-ro-ge-ne-ous  
o-ra-to-ri-o  
e-ter-ni-ty  
e-ve-ry  
a-ny

"When double consonants are written the same principle applies: only one of the consonants is sounded, and therefore only one is recognized in phonetic syllabication. Thus:

ha-(p)py	i-(r)ri-tate
fe-(l)low	a-(t)ten-dance
si-(l)ly	di-(f)fi-cul-ty
ho-(r)ror	e-(r)ro-ne-ous
cu-(n)ning	a-(l)le-go-ri-cal. . .

"In the syllabication of words the division may sometimes be, indifferently, either etymologic or phonetic, as in the words  
baker, eating, striking, owner, ruler.

"These words, divided etymologically, yield the syllables  
bak-er, eat-ing, strik-ing, own-er, rul-er

but divided phonetically, they yield the syllables

ba-ker, ea-ting, stri-king, ow-ner, ru-ler. . . .

"The faulty action of the mouth — in moving from open to close positions — is strikingly illustrated in Stuttering and Stammering. The voice, in these cases, is choked in the throat, or emitted in discontinuous jerks, and the mouth is CONSONANT-CLOGGED. In my long experience with defects of this kind, the true principle of oral action has invariably worked like a charm. In many instances the impediment has wholly disappeared after the first lesson. Only the nervous dread of habitual difficulty can prevent immediate relief when once the stutterer has practically learned the simple law of phonetic syllabication: — to articulate from close to open positions."<sup>1</sup>

The mode of enunciation here recommended undoubtedly conduces to comprehensibility of speech, and should be observed at least by public speakers. It is by no means patent, however, in what manner stammering is to be affected by the procedure enjoined. Stammering usually occurs at the initial syllable; whereas phonetic syllabication begins at the second syllable. If the measure in question ever mitigates stammering, it undoubtedly does so by inspiring confidence, eliminating multiple thought, and focussing attention on the verbal imagery. Naturally one would expect any benefit derived to be purely temporary.

<sup>1</sup> This writer does not suggest, of course, that a word commencing with a vowel should have prefixed to it the final consonant of the word preceding. Phonetic syllabication is to be applied to the syllables *within a word*.

Occasionally the stammerer is counselled to circumvent "troublesome initial consonants" by detaching them from the body of the word. He is advised to make a distinct pause between the consonant and the succeeding vowel, and later to reduce the pause till it becomes "imperceptible" (or is actually eliminated). Reading-practice is of course prescribed

### READING-CHART I

I l—ooked t—o th—e w—eather s—ide, and th—e s—ummer h—ad d—eparted. Th—e s—ea w—as r—ocking, and sh—aken w—ith g—athering wr—ath. Upon its s—urface s—at m—ighty m—ists, wh—ich gr—ouped th—emselves into arches and l—ong c—athedral aisles. D—own one of th—ese, w—ith t—he f—iery p—ace of a qu—arrel fr—from a cr—oss-b—ow, r—an a fr—igate r—ight athwart our c—ourse. "Are th—ey m—ad?" s—ome v—oice exclaimed fr—from our d—eck. "D—o th—ey w—oo th—eir r—uin?" B—ut in a m—oment, as sh—e w—as cl—ose upon us, s—ome impulse of a h—eady c—urrent or l—ocal v—ortex g—ave a wh—eeling b—ias t—o h—er c—ourse, and off sh—e f—orged w—ithout a sh—ock. As sh—e r—an p—ast us, h—igh aloft amongst th—e shr—ouds st—ood th—e l—ady of th—e p—innace. Th—e d—eeps opened ahead in m—alice t—o r—eceive h—er, t—owering s—urges of f—oam r—an after h—er, th—e b—illows w—ere f—ierce t—o c—atch h—er.

### READING-CHART II

B—ut f—ar away sh—e w—as b—orne into d—esert sp—aces of th—e s—ea: wh—ilst st—ill b—y s—ight I f—ollowed h—er, as sh—e

r-an b-efore the h-owling g-ale, ch-ased b-y angry s-ea-b-irds  
 and b-y m-adding b-illows; st-ill I s-aw h-er, as at the m-o-  
 ment w-hen sh-e r-an p-ast us, st-anding amongst the shr-ouds,  
 w-ith h-er wh-ite dr-aperies str-eaming be-fore the w-ind.  
 Th-ere sh-e st-ood, w-ith h-air d-ishevelled, one h-and cl-utched  
 amongst the t-ackling — r-ising, s-inking, fl-uttering, tr-embling,  
 pr-aying; th-ere f-or l-eagues I s-aw h-er as sh-e st-ood, r-aising  
 at intervals one h-and t-o h-eaven, amidst the f-ier-y cr-ests  
 of the p-ursuing w-aves and the r-aving of the st-orm;  
 until at l-ast, upon a s-ound fr-om afar of m-alicious l-aughter  
 and m-ockery, all w-as h-idden f-or ever in dr-iving sh-owers;  
 and afterwards, b-ut wh-en I kn-ow n-ot, n-or h-ow.

This practice of dividing the initial consonant from the vowel is a sort of natural corollary to the belief that the stammerer's difficulty lies with the consonant, and that he can — as may be readily demonstrated — always produce the consonant when it is detached.

But the theory neglects the fact that the speaker may be unable to append the vowel when the consonant has been produced — and certainly it avails the stammerer little to enunciate the initial consonant several seconds before the remainder of the word is forthcoming. The particular measure in question, however, is seldom recommended by reputable teachers of stammerers; it is rather the stock-in-trade of occasional charlatans.

An interesting variation of the foregoing expedient is the subject of the following paragraph :

"No stammerers, I believe, hesitate in making vowel sounds, or in speaking syllables commencing with vowels. For instance, they can always say *a*, *all*, *eke*, *ire*, *our*, etc. But in attempting to get out such words as *ball*, *gaul*, *maul*, *leak*, *seek*, *speak*, *fire*, *flour*, *power*, *growl*, etc., they succeed only in giving a sound which they know better than I can describe. Now, let a stammerer try the word *speak*. If he thought any one was expecting something from him whom he was anxious to please, he would give a sound something like *esp*, and balk. Let him stop right there and say *eke*. He may now try them again in their order, uttering them as *two distinct syllables*, and he has *esp-eeek*; make it shorter and it becomes *sp-eeek*. Let him now try the word *commencement*; pronounce it in this way: *Kuh-um-muh-ence-muh-ent*; *potatoes*, *puh-o-tuh-a-tuh-oes*; *pepper*, *puh-ep-puh-er*. The same method can be applied to any word with similar results. With a little practice the stammerer will be able to speak the two parts of a divided syllable so quickly that a hearer will hardly perceive the division. It will be seen that in this method a lesser evil is incurred to eradicate a greater, after which the former can certainly be overcome."

We leave the comment to the reader.

Another expedient that is occasionally recommended consists in interpolating a more or less "inaudible" *h* between the initial consonant and the following vowel—

C-halm on th-he l-histening ear of n-hight

C-home Heaven's m-helodious str-hains,

Wh-here w-hild J-hudea str-hetches f-har

Her s-hilver-mantled pl-hains —

and so on.

The object of the aspirate is probably to open the glottis, which it would doubtless do if physical stam-



mering should effect its closure. But opening the glottis is not curing stammering; and if it were, this end could be obtained by more natural means.

The next measure that we have to consider is "syllabic speaking," a device already a century old, but one that flourishes despite its antiquity. The term "syllabic speaking" is generic rather than specific: it implies several modes of utterance in which the syllabical construction of words is given unwonted emphasis. In some systems of syllabication the students dismember their words into syllables by distinct pauses, and often by regular syllabic inspirations. In other systems the long and short syllables of words are given approximately equal duration, and the dividing pauses may or may not be observed.

The various modes of syllabic speaking may be prescribed merely as forms of practice, or may be enjoined as antidotal measures to be observed during conversation. One teacher of stammerers writes as follows in reference to syllabic reading as an exercise:

"I employ the following means: According to the degree of the malady and the culture of the stutterer, I select a reading-exercise from any prose work. The stutterer takes the position already described, and breathes in deeply and long. Then he reads the sentences loudly and slowly, syllable by syllable. At first, the sentences should be short, consisting of three or four words, as, 'Anton loves his brother,' 'John is a good scholar,' etc. . . .

"As we have observed, reading in this way usually proceeds without stuttering; yet, should any difficulty be found, the syllable or word must be repeated until the whole sentence can be spoken fluently and perfectly. The words which form the sentence should be read syllabically, as 'An-ton-loves-his-broth-er.' In doing this, the stutterer should take care not to read, or subsequently talk, in a mechanical, musical measure, as has been recommended by former speech-physicians. For, besides being only a temporary advantage and afterward becoming wholly useless, it is a new defect of speech acquired as a poor exchange for his stuttering. Reading should be done deliberately and carefully, but not in a monotonous manner. In this respect my method is to be preferred, for in all of its parts it rests upon natural laws. This reading should continue, as a rule, for half an hour, in which time from 20 to 30 sentences are practised. On the next day the sentences should be longer, say from 5 to 6 words in length, and this number increased daily until sentences of 20 to 30 words are practised and spoken syllable by syllable, during one exhalation, with careful observance of the rules already given."

Another instructor prescribes syllabication of alliterative sentences. We give below, a few of the exercises, together with the prefatory instructions:

"Fill your lungs constantly.

"Go SLOWLY.

"Monotone (the words being pronounced in syllables, with a break between each).

"*Note.* If the stammerer will 'drop the jaw' at the first syllable of each word in exercise 'A' he will find his difficulty gone!

## 156 SYSTEMS OF TREATING STAMMERING

### A

"Al-though — An-nie — As-ton — al-ways — an-swered — as — as-tute-ly — as — any-one — all — Al-fred — Armstrong's — af-fa-bility — ap-peared — ab-so-lute-ly — af-fec-ta-tion.

### B

"Bl-ow — bl-ow — bit-ter — bi-ting — boi-sterous — bl-iz-zard. Be-ware — boys — be-ing — bold — be-yond — bounds — brings — bound-less — bur-dens — by — bad — be-havior.

### C

"Call — clear-ly — Char-lie — Cam(p)-bell — call — cant-ing — com-i-cal — Cissie — Count-ing — coins — con-tain-ing — Com-mon-wealth — car-i-ca-tures.

### G

"Gai-ly — girls — gai-ly — ga-ther — great — gra-pes — grow-ing — green. Good-by — gran-ny — give — God-frey — Grec-ian — go-ld — gog-gles — gross-ly — gro-tesque.

### H

"*Note.* Take a short swift breath before each of these words.

"Hunt-ing — on — hard — high — hills — hurts — horses' hoofs. Hil-da — Hicks — hurl-ed — hun-dreds — of — huge — hops — at — Henry.

### I

"Ireney — is — ill. In — In-dia — it — is — in-tol-er-able — in — the — in-ter-ior. In-dia-rub-ber — idiots — in — Il-fra-combe — in-duce — im-pi-ous — im-pos-tors — to — in-dulge — in — in-fam-ous — im-i-ta-tions !

P

"Poor — pit-i-able — Pe-ter — Pi-per — plod-ding-ly — pick-ed — pecks — of — pierc-ing — pep-per — corn. Pen-nies — prove — power-ful — prop-er-ty.

Q

"Quash — quar-rels — quick-ly. Quell — quiet-ly — un-queen-ly — queries. Quest-ions — quot-ed — quiet-ly — quell — quix-otic — Quake-rs.

R

"Round — rug-ged — rocks — rag-ged — ras-cals — ra-pid-ly — ran — rural — races. Robert's — rich — red — roses — rare-ly — re-ap-pear-ed.

V

"Vex-ed — vet-erans — very — vigor-ous-ly — vin-di-cated — vill-a-gers. Ven-ture-some — villains — vain-glorious-ly — visit-ed — vines. Val-u-able — voices — vary — vastly.

W

"Will-ie — Wil-son — was — work-ing — when — Wat-son — went — whist-ling — west-ward — watch-ing — wick-ed — water-rats — wand-er — wear-i-ly — with-in — the — white — wharf.

"*Note.* 'Dwell' on w's, making a sound like the wind.

Y

"Yes-ter-day — you — yourself — yell-ed. Yes — yon-der — yok-el — yearns — to — yacht.

Z

"Zulus — zealously — rode — zebras — zig-zag — to — Zion!"

A German teacher of stammerers has devised practice-charts for syllabic reading, in which symbols for respiration, vocalization, etc., are employed. He attaches considerable importance to the symbols:

"These signs, though far from having or pretending to have the significance of notes, are, nevertheless, of the utmost importance to the student, for they show him the exact place where he must produce the voice, the sounding-consonant, the voiceless consonant (which is capable of prolongation), the explosive consonant; and, to a certain extent, they even show him the duration of all these. These signs arouse in the student the feeling for correct breathing for production of sound and correct speech, syllabically as well as rhetorically.

"The practice of . . . a piece of poetry or of prose must be carried on in *one* tone (that is, on one pitch), the one which the student can produce without the slightest exertion."<sup>1</sup>

Transcriptions of the exercises employed are given on pages 159 and 160.<sup>2</sup>

There are, of course, numerous auxiliaries to the syllabic exercises. In some institutions the pupils practise while marching, pronouncing one syllable to a step, syllabicate words while performing dumb-bell exercises, and so on. In most schools where syllabication is employed as an exercise, the pupils progress from syllabic reading to the normal reading of poetry and prose. But in some stammering-schools

<sup>1</sup> The above passage is taken from an English translation.

<sup>2</sup> Symbols as formerly employed. The dotted line beneath a consonant of course denotes its surd quality. A short vertical line beneath a vowel specifies direct attack.

EXERCISE 1

V The V ve r vy law V whi ch V mou lds V a V tea r  
 V A nd V bi ds V i t V tri ck V le V fro m V i ts V sou rce  
 V Tha t V law V pre V se r ves V the V ea rth V a V sphe re  
 V A nd V gui des V the V pla n V e ts V i n V thei r V cou rse

EXERCISE 2

V The ve r vy law V whi ch mou lds V a tea r  
 V A nd bi ds V i t tri ck V le fro m V i ts sou rce  
 V Tha t law V pre se r ves V the ea rth V a sphe re  
 V A nd gui des V the pla n V e ts i n V thei r cou rse

### EXERCISE 3

V The      ve      ry      law      V whi      ch      mou      lds      a      tea      r  
 VA      nd      bi      ds      i      t      tri      ck      V le      fro      m      i      ts      sou      rce  
 V Tha      t      law      pre      se      rves      V the      ea      rth      a      sphe      re  
 VA      nd      gui      des      the      pla      n      V e      ts      i      n      thei      r      cou      rse

### EXERCISE 4

V The      ve      ry      law      whi      ch      mou      lds      a      tea      r  
 VA      nd      bi      ds      i      t      tri      ck      le      fro      m      i      ts      sou      rce  
 V Tha      t      law      pre      se      rves      the      ea      rth      a      sphe      re  
 VA      nd      gui      des      the      pla      ne      ts      i      n      thei      r      cou      rse

EXERCISE 5. "Speak the whole line SYLLABICALLY and RAPIDLY." EXERCISE 6. "Speak the whole line NOT syllabically but RHETORICALLY, not in the least forced, guided only by feeling."

syllabic reading and speaking is not an exercise, but the whole remedial system ; and the pupil is discharged from the institution with this mode of utterance as an amulet to ward off his impediment.

Syllabic speaking is an utterly purposeless procedure. It is a bow at a venture: no clear explanation has ever been made of the purpose it is intended to accomplish. As an exercise it is a vagary ; as a mode of enunciation it is an objectless and futile travesty on human speech.

We have now to consider *rhythmic speaking*, a popular form of syllabic utterance. With rhythmic enunciation the syllables are given uniform length, and speech is accorded rhythm more or less imitative of musical or poetic measure. Speech is monotonous and drawling, rather than staccato — as is usually the case with “syllabic speaking.” Rhythmic speech is frequently recommended as a mode of utterance to be observed as a preventive of stammering ; syllabic speaking is employed chiefly as an exercise.

The following paragraphs are by Colombat, who was among the first to employ rhythm in the therapy of stammering : <sup>1</sup>

<sup>1</sup> Passages excerpted from Dr. Flies' “Orthophonie” (pp. 53 ff.), an abstract of Colombat's “Du bégaiement et de tous les autres vices de la parole” (Paris, 1830) and his “Mémoire sur la physiologie et thérapeutique du bégaiement, faisant suite au traité d'orthophonie” (Paris, 1836).



"It has always been observed that stammering ceases as though by magic when the person afflicted sings or recites words to musical or poetic measure. But no one has sought to explain this phenomenon; though an explanation is of the highest importance for the treatment of an infirmity that occurs so often, and which one usually regards as, with few exceptions, beyond the aid of curative art.

"Two causes, one the result of the other, are accountable for the stammerer's fluency in singing. The first is that, since he is compelled to accord to his utterance a musical and poetic rhythm, the movements of the organs concerned in phonation must needs occur with greater accuracy and regularity. The second is that, since the stammerer must constantly have the idea of measure, this accessory idea offsets the relative preponderance of the main idea giving rise to the conversation; and, further, that this accessory thought modifies the cerebral excitation, whence it follows that the neural irradiation proceeds more slowly and in a more orderly manner, thus falling more into harmony with the contraction of the speech-muscles. Rhythm is capable of regulating not only the irregular movements of the speech-organs; but it exerts a salutary influence on all the other organs of the human body. The following observations, selected from a considerable number, demonstrate this fact:

"M. — is the son of a prefect and a nephew of an old minister of the interior; was a student at the polytechnical school, but is now in military service. With this gentleman the peculiarities of speech and the convulsive movements that affected him, disappeared as though by magic during the time that he was practising the various exercises of the vocal organs that we prescribed for his impediment. The same thing occurred when he played the piano or heard another person playing a musical instrument. In 1833 we treated a young woman, — Mlle.

Coutance, who lived at 16 Rue des Bernardins, Paris. Not only did this young woman stammer, but in addition she was subject to involuntary movements of the limbs when standing or walking. The rhythmic speech to which she resorted in order to cure her stammering, had the most beneficial influence on these involuntary movements; and they completely disappeared together with the infirmity regarding which she came to consult us. These two cases seem to prove that one should employ music, or rather rhythm, as a curative agent in certain nervous diseases — such as Saint Vitus's dance, for instance.

"A medical friend of ours has assured us that he knew a young woman that limped despite the absence of any observable organic defect, but that her infirmity was not in evidence when she danced or walked in step with another person.

"Music, says Plato (that paragon of accuracy), was not accorded to man by the immortal gods merely to delight and titillate the senses, but also to quiet the disorders of the soul and the irregular movements that a body full of imperfections must suffer.

"Every one knows the power of the drum with its uniform rhythm — how it allays tiredness and helps the soldiers to march on in order. And every one knows that a young and weak person may dance through a whole night without fatigue — owing to the rhythm of the music. And lastly, the instinct that compels us to take steps of uniform length, and trip along with regular rather than irregular movements, and the regular interruptions of the pulse and of respiration, and a host of other phenomena furnish sufficient proof that rhythm is a need arising from the first laws of animal economy, and that we can make all our movements equal, regular, and perfect with the aid of this universal principle.

"The Romans knew the influence of rhythm upon speech, for one reads in the *Encyclopédie méthodique, par Framery et*

*Ginguenê* that it was customary in Rome for those that spoke with difficulty to allow themselves to be accompanied by a musical instrument when making a public address, and that in speaking, they then followed the musician. Gracchus never spoke in public without having a slave beside him playing lightly on a flageolet.

"Declaiming in verse greatly modifies stammering. The stammerer is compelled to observe a certain poetic rhythm, and to identify himself with the character he is portraying: he is successively Cæsar and Britannicus, then Tancred and Othello. The attention that he must constantly apply to place himself in the position of his hero becomes an accessory idea; which, I repeat, together with the main idea, so modifies and reduces the nervous influence that precedes the latter, that this influence comes more into harmony with the muscular contractions of the speech-organs.

"After what I have already said, the reader will of course infer that the basis of my curative system is rhythmic speech.

"And in truth, one of the principal means that I employ in combating stammering is rhythm, this perfect regulator of all our movements. . . . One must take care to speak the syllables metrically, beating time with the foot or pressing the thumb and forefinger together at every syllable,<sup>1</sup> or after the second, third, or the fourth and sixth syllables — as one may wish. One can beat time according to  $\frac{1}{2}$ ,  $\frac{2}{3}$ ,  $\frac{3}{4}$ ,  $\frac{4}{5}$ , or  $\frac{5}{6}$  measure. The stammerer must rely especially upon this metrical regulation of the syllables, and must give his chief attention to it."

<sup>1</sup> Variants of this device employed by modern "speech specialists" are: nodding the head, flexing the index-finger, waving the arm, moving the hand in a circle or in the form of a horizontal 8 ( $\infty$ ) and executing consentaneous finger-movements, beating time with a baton, etc.

(Three of Colombat's "orthophonic" exercises are given on the following pages.)

Colombat also practised his pupils on articulatory exercises and alliterative sentences. Most of this work was performed to the measured beats of a metronome — or "muthonome," as Colombat preferred to call his instrument.

Rhythmic utterance has been the basis of perhaps 30 to 40 per cent of the various systems introduced since the time of Colombat. Rhythm was employed or recommended by Cull, Klencke, Katenkamp, Guttman, Rosenthal, Lehwess, Kreutzer, Günther, Shuldham, and a dozen other of the older teachers and writers.

The following typical indorsements of rhythmic speech are from three different sources :

"We chant over a line of the multiplication table, dividing the sentences into metrical feet, and marking the accented syllables with a gesture as if beating time; then again in a natural manner, but distinctly marking the rhythm, accent and emphasis. In a few minutes he [the pupil] repeats the whole table without hesitation. We select a stanza of poetry, or a passage in prose resembling poetry in the rhythm and melody of its style; divide it into metrical feet, and first chant it, read it in concert, with a marked expression of the rhythm, accent and emphasis, and a free, natural expression of the sentiment. He now readily reads it by himself."

And thus another writer :

"By the way, this charming poem of 'Nuremberg' is most suitable reading for stammerers, as the rhythm in it is so well

**"EXERCISE 1**

*which consists in beating time after every 6th syllable. The rhythm corresponds to  $\frac{6}{8}$  time in music."*



**"EXERCISE 2"**

*for poetry. Metre corresponding to  $\frac{1}{2}$  time."*

*Adagio*



**“EXERCISE 3**

*for prose. Metre corresponding to  $\frac{1}{2}$  time.”*

*Adagio*



marked, or, at any rate, is capable of being well marked, and those are just the pieces which should be given to patients who suffer from defects of speech. A good plan of insisting on the rhythm being well marked, is to time the reading with the ordinary metronome used by musicians. Eighty-four is a good time for such a piece as Hood's 'Lay of the Laborer,' and for his 'Eugene Aram.' This would be a 3-time in music. I should not advise the use of the metronome in teaching elocution, as it would tend to make a reader monotonous, but the stammerer requires extra stimulus to regulate and render rhythmical his mode of speech.

"Eighty-four is a good time for stammerers to begin reading poetry by, and then by degrees they can advance to 104 or 112. When a stammerer can read poetry with comfort and evenness, then let him be promoted to the dignified difficulties of prose, and in his prose readings let him not forget the lessons taught him by the metronome, though in reading prose this judicious little tick-tack would be out of place entirely."<sup>1</sup>

The following is by a German writer :

"When a stutterer comes to me for treatment, I explain in a few words the nature of stuttering, and follow with respiratory gymnastics, giving the reasons why the breath should be managed in this and not in any other way. My next effort is to teach him how to speak. All the pupils then open a child's book (Schultz and Steinmann, part 3) to a story which is easy to understand and remember. This is read in concert, the measure being indicated by Maelzel's metronome, which is usually set at 108, — that is, it beats 108 times in a minute. In severe cases I may begin with 60 beats. To every beat a

<sup>1</sup> With poetry, the rhythm to be followed is often indicated by accent-marks placed above the syllables.



syllable is read. The pupil takes breath beforehand and reads to the next pause, where he inhales again. Should the pause, however, come after a few words the inhalation is omitted, for every overfilling of the lungs excites unduly. On the other hand, if the air is consumed before a pause is reached, the pupil stops and takes in breath, quietly and not hastily, and before he feels distressed for air. Every syllable is accompanied with a downward beat of the hand. Very severe stutters, in the first weeks, are allowed to speak only by the metronome, which they must always carry with them, or they must give the beat audibly on some convenient object, as a table, desk, etc. From the first day of treatment the pupil must observe the prescribed measure, and inhale at every punctuation. Whoever fails to observe the measure, does not beat with his hand, speaks too rapidly, neglects to inhale at the right time, or stutters after he once has control of his speech, keeps account of his various shortcomings by tying knots in a string, and these are noted every day.

"This measured talking, as just described, is of great importance. It not only causes the organs to act synchronously and more powerfully, but it has another effect, which cannot be too highly valued, viz. : it divides the stutterer's attention directing his thoughts elsewhere and not permitting him to concentrate his whole mind upon his impediment, as he is accustomed to do. The effect of diverting the mind from an overpowering idea is shown by Dr. Schrank, who alludes in his book to the means used in Southern Germany to stop hiccupping. The sufferer thinks intently of a handsome, spotted cow, and pictures her to himself clearly and minutely. What happens? In many instances the hiccupping is gone! Likewise measured talking serves as an escape-channel for the anxiety a stutterer usually feels when he wishes to speak. Even if his excitement be great, measured talking, though

used in speaking only five or ten words, has a quieting effect."<sup>1</sup>

Colombat's "orthophonic" system is still practically intact in a number of American and European institutions. The system is particularly rampant in the United States of America, where it is virtually the entire "method" of three of the largest stammering schools. The "metrical" speech of the "orthophonic" method is implied in the names of several American and English "systems" or "speech institutions." Colombat's "muthonome" has ticked its way almost the round of a century. In an American institution it is now a "Word Regulator"; in an English school it is again a metronome: but with its various aliases and guises it still rattles on.

It may be of interest to note that rhythm, as a remedy for stammering, did not originate even with Colombat; though the latter was undoubtedly the first to put the complete system into print. Colombat was in many respects a type of the modern "speech specialist," and he purloined most of his "inventions" from other investigators. According to Chervin:<sup>2</sup>

"Colombat appropriated Rullier's theory of the cause of stammering. He borrowed from Serre d'Alais his classification of stammering and his *isochrone*, which he christened *mutho-*

<sup>1</sup> Quoted from an English translation.

<sup>2</sup> "Bégaiement et autres maladies fonctionnelles de la parole," 3d ed., p. 190.

*nome*; he took from Cormack [McCormac ?] the best feature of his system — the initial inspiration."

Should one prefer to regard Colombat as the victim of a series of unfortunate coincidences, he must nevertheless admit that his "discoveries" were anticipated.

Rhythm was employed by Thelwall as early as 1801, which was long before Colombat entered the field. Thelwall says of his system:<sup>1</sup>

"From one simple and original principle (whose existence and operation, I trust, are sufficiently demonstrated by the series of experiments regularly exhibited) I trace the fundamental and *physical* distinctions of heavy and light syllables; and from the *unavoidable* alternations of these (or of pauses of the voice during the actions by which they should be produced) I demonstrate the formation of those simple cadences of common and triple measure, out of which arise all the beauties of rhythmus, and all the facilities of fluent and harmonious utterance. From an injudicious application of undisciplined volition to this physical action, I endeavour to account for all the gradations of harsh, ungraceful, and interruptive delivery; and from inconsiderate attempts to violate this primary law, all the customary *impediments of speech*."

"Yet I could not but observe and feel, how much the principle of physiological rhythmus, and the conformity of the volition with its dictates, mitigated the labour of pectoral exertion, and contributed to a healthful and agreeable action of the lungs."<sup>2</sup>

"The vindication and illustration of the rhythmus of

<sup>1</sup> "A Letter to Henry Cline, Esq. on Imperfect Development of the Faculties," etc. (London, 1810), p. 189.      <sup>2</sup> *Loc. cit.*, p. 10.

Milton, is, in a critical point of view, the favorite object of my system."<sup>1</sup>

"*All impediments* are best surmounted (even in what relates to the primary requisites of facility and intelligibleness) by aiming at the highest graces of *rhetorical emphasis* and *harmonic inflection*."<sup>2</sup>

"In my own particular practice, I have derived considerable assistance from an application of the principles of musical *inflection* and *proportion*."<sup>3</sup>

Thus we see that Thelwall employed rhythm more than a century ago. But even Thelwall was anticipated, for Cælius Aurelianus<sup>4</sup> recommended a form of rhythm<sup>5</sup> a quarter of a century before Thelwall treated his first case of stammering.

This historical review may seem irrelevant, but we cite the facts to show how utterly baseless (and base) are the pretensions of a number of modern "speech specialists" to have invented the rhythmic "systems" that they ply.

And what of the efficacy of rhythm?

It must be admitted that with slow, drawling, rhythmic speech, stammering diminishes or disappears in a majority of cases. Therefore, if the stammerer will carry a metronome and carefully wind the instrument before speaking, and, whilst speaking,

<sup>1</sup> *Loc. cit.*, p. 159.

<sup>2</sup> *Loc. cit.*, p. 227.

<sup>3</sup> *Loc. cit.*, p. 231.

<sup>4</sup> *De morbis acutis et chronicis libri octo.* Joh. C. Amman recensuit emaculavit. Amstelædami 1775.

<sup>5</sup> The rhythm of declamatory speech.

watchfully follow its rhythmic beats, he may secure some degree of fluency. This success may also be achieved if he will beat time with a baton or with his hand, or will kick the wall at every syllable. Such is the potency of the system. But when the stammerer ceases to apply these royal remedies, he will almost certainly stammer as before.

Wyneken, who attended the old Katenkamp Institute (a school in many respects superior to a number of modern American stammering-schools) writes thus of his experiences: <sup>1</sup>

"Now comes the most difficult task for the stammerer — resorting to rhythmical speech. He must pronounce every sentence as a polysyllabic word. He must speak slowly, and must accord all syllables a like duration. Where one would punctuate, he must carefully inhale.

"When the pupil has observed metrical speech for several weeks in the institute, and has become thoroughly accustomed to it, he is permitted — if no difficulties have occurred — to come gradually into contact with strangers. He is sent on errands (this usually furnishes a difficult task for the stammerer), and is at various times addressed suddenly and unexpectedly. If he successfully withstands these tests after he has employed rhythmic speech for several months, he is discharged as cured.

"This is the formal procedure if progress has been continual and uninterrupted; but unfortunately this seldom occurs. Only a very few fortunate ones find themselves permanently rid of their stammering. The majority immediately

<sup>1</sup> "Ueber das Stottern und dessen Heilung," pp. 24 ff.

relapse, and for some time the impediment is often worse than it was originally. . . .

"This relapse comes sooner or later. Usually it occurs while the student is still at the institution; sometimes it happens while he is packing his things to depart; occasionally it supervenes after he has returned to his former occupation and environment. It is very seldom that the relapse does not occur at all. And now it is indeed a difficult task for the stammerer to reconquer doubt. — I remained at the institution in question continuously for two and a half years, but in this entire time I never spoke as fluently again as at the end of the first six weeks.<sup>1</sup>

"One of the chief reasons for the relapse lies in the employment of rhythmical speech, which mode of utterance it is really exceedingly difficult to follow. It was never difficult for me to observe silence. I know many pupils that fulfilled the requirements in this regard to the very letter; but I know only one that observed rhythmical speech afterwards in life. . . . To silence one can accustom himself, but to rhythmical speech, never."

However, the stammerer readily habituates himself to the rhythmic bodily movements that are frequently prescribed for the "regulation" of metrical speech. Denhardt records an incident that may well be cited in this connection:<sup>2</sup>

"Count K. underwent as a boy a course of treatment with Professor Lewis, of Berlin. The professor's system was rhythmic speech, and the pupil had to accustom himself to regulating speech by the prescribed rhythmic movement of

<sup>1</sup> These first six weeks were observed as a period of silence.

<sup>2</sup> "Das Stottern eine Psychose," p. 45.

the foot. As this expedient soon lost its potency, he hit upon the device of intensifying the movements by walking forward two or three steps, and then executing as many steps backward. While performing this manœuvre he would strengthen the rhythm by planting the regulating foot with unusual firmness; and all this, of course, he had to do with as little display as possible. When these elaborate preliminaries progressed to the first or second stamp of the foot, he could begin to enunciate."

The writer has seen a number of stammerers that had been taught to beat time with the hand. The ultimate accomplishment of many of these subjects consisted in threshing the air while they stammered.

The time-beating artifice is not so much a cure as an additional disease. In his "Autobiography of a Stutterer," Edgar S. Werner (who was editor of *The Voice*, a defunct journal published for stammerers) thus arraigns the method:<sup>1</sup>

"The nearest I came to a treatment, up to 'this time, was a call upon an itinerant stutter-doctor, who showed the charlatan too plainly for my parents to be deceived. His 'method' was beating time at every syllable. This is not the place to consider this time-beating business, which was practised in France fifty years ago, was then taken up in Germany and in England, and only last year, I believe, was revealed (?) to Americans by Dio Lewis, who assured the afflicted that it was a sure remedy. It is nothing of the kind. Many stutterers would be made worse the more they practised it."

<sup>1</sup> *The Voice*, Vol. VI, p. 125.

On such a subject, the opinion of so ingenuous and well-informed a writer as Werner is practically final.

There is little indeed that can be said in favor of any form of rhythmic speech. Its introduction was, and its application always has been, purely empirical. The one poor, impotent, *ex post facto* argument that has been used to defend it, is that observance of rhythm divides the stammerer's attention. But it has never been shown that "division" of attention was a thing to be desired. And were it desirable, how long would the expedient effect the "division"? Rhythmic speaking would soon become a habit, and would require no more attention than speaking in an arrhythmic manner. The argument, even if it were valid, would make the expedient effectual only as a temporary measure. — Probably the real explanation of the fact that slow, rhythmic speech possesses some slight efficacy, is that this mode of enunciation places a physical emphasis on the vowel, and therefore necessarily a mental emphasis on the auditory image. But this argument is itself a warning: it presages the eventual predicament of the stammerer — a mental condition in which his verbal imagery is rhythmical and hideously distorted.

Gesticulation is another expedient occasionally recommended for "dividing the stammerer's attention," "withdrawing his attention from his impediment," and so on. The various gestures are some-



## 178 SYSTEMS OF TREATING STAMMERING

times called "opposing movements," and it is asserted of them that they oppose or "counterbalance the spasmodic tendency to stammer."

This gesticulatory measure is probably a century old, for it was recommended by as early a writer as Serre d'Alais.<sup>1</sup> This investigator advised the stammerer to execute downward movements of the arms at difficult syllables. Violette<sup>2</sup> advised the stammerer to gesticulate before speaking. More recent writers have recommended gesticulation at every accented word in a sentence.

A few of the specific gestures prescribed by teachers of stammerers are: nodding the head, throwing the head back with a jerk, snapping the fingers, pulling at a coat button, pressing the thumb against the chin or larynx, waving the hand, raising a handkerchief to the mouth, tapping with the foot, grasping and releasing the back of a chair, winking the eyes, fumbling a rolled newspaper, etc.

"'Prof.' Grady's secret is that the human mind contains at the same time *one thought and a half*, and in the short space of two hours he teaches the stutterer to banish this half thought, which, according to St. Grady, is the sole cause of the defect. The means used to accomplish this end are jingling the watch-chain, striking the hips, and other similar 'natural and graceful movements.'"<sup>3</sup>

<sup>1</sup> "Mémorial des hôpitaux du midi," 1829.

<sup>2</sup> "Études sur la parole et ses défauts," Paris, 1862.

<sup>3</sup> Potter, "Speech and its Defects," p. 93.

Many years ago Dr. Graves recommended an empirical measure, which is, unfortunately, encountered even at the present day. Respecting the expedient he says: <sup>1</sup>

"I have recently discovered a method by which the most inveterate stutterer may be enabled to obtain utterance for his words with tolerable fluency. It is simply by compelling him to direct his attention to some object, so as to remove it from the effort he makes to speak. Thus, I direct him to hold a rule or a bit of stick in his right hand, and with it to strike the forefinger of the left, in *regular time* with the words [apparently not the syllables] he is uttering; the eye must be fixed, and all the attention directed to the finger he is striking, and the time must be strictly kept. This method I have tried in several instances with complete success, and Dr. Neligan informs me that, since I first mentioned it to him, he has found it completely effectual in numerous cases. Although, of course, when thus employed, this plan can only be regarded as a means of affording temporary relief, I have no doubt, that if it were perseveringly followed out with young persons who stammer, both in reading and speaking, it would cure them permanently of the unpleasant affection."

The employment of gestures and minor bodily movements is usually prescribed as a means of diverting the stammerer's attention from his impediment. But one writer, Dr. Findley, has recommended gesticulation for another purpose. The following citation presents his theory: <sup>2</sup>

<sup>1</sup> "Clinical Lectures," edited by Dr. Neligan; London, 1848. Quoted by Hunt, "Stammering and Stuttering," 7th ed., p. 159.

<sup>2</sup> "Stammering," *The Voice*, Vol. VII, pp. 73-74.

"We can breathe with the ribs or with the diaphragm; with the former on the principle of the *bellows*; with the latter on the principle of the *piston*. In the former case in inspiration, the ribs, by their appropriate muscles, are rolled upward and outward, enlarging the circumference of the chest; in expiration they return to their former position, partly by their own elasticity and in part drawn down by the abdominal muscles. In the latter case, we may breathe with the diaphragm alone; the muscle which separates the cavity of the chest from that of the abdomen is attached to the cartilaginous extremity of the ribs, and, when relaxed, is forced, by the action of the abdominal muscles high up into the cavity of the chest. When it contracts, it draws straight across the bottom of the chest, forming a vacuum in the lower part of the chest, into which the air rushes; again relaxing, the abdominal muscles force it up into the chest, driving the air before it. In ordinary breathing we combine these methods.

"In making sound, we expel the air from the lungs upon a different principle; the diaphragm, instead of relaxing as in breathing, contracts, and, by diminishing the circumference of the chest, expels the air as completely from the lungs as in the other method; in the one, the diaphragm in expiration is passive, in the other it is active. Both in breathing and in making sound, we inspire by contracting the diaphragm, thus causing a vacuum in the bottom of the chest; but we expire upon a different principle. In ordinary breathing the diaphragm relaxes, and the abdominal muscles force it up into the chest, driving the air before it. In making sounds, it continues to contract, and expels the air by diminishing the circumference of the chest. This action of the diaphragm is the normal mode of making sound; it is not necessary to the production of sound, but is necessary to full, clear, far-reaching sound. Many persons talk habitually with the diaphragm relaxed, but the

voice is comparatively feeble and unsteady, and the effort is very exhausting. When calm and unexcited, I can talk with the diaphragm relaxed, but the voice cannot be heard half so far, nor kept up half so long, and in hurried conversation the tongue will be tripping continually. When the vital energy is feeble, this muscle is slow to change from the action of breathing to the action of sound, and acts feebly; and, in passing over the consonantal sounds, relaxes, and, when it relaxes, the vocal cords unkey, and the muscles of articulation and breathing play spasmodically. . . .

"More than fifty years of my life had passed before my attention was turned to these two principles: — the different action of the diaphragm, in breathing and in making sound, and the fact that by gesture we can compel the diaphragm to take on the same mode of action that is necessary for effective speech. Until then my social intercourse was always liable to great embarrassment; and, on great emergencies, I have been subjected to severe mortification by trivial circumstances, such as the loss of a night's rest, an indigestible meal, or some trifling embarrassment. Since I have made this discovery, it never obtrudes itself upon my domestic circle, and gives me very little trouble anywhere or under any circumstances. Reading aloud, while reclining on a lounge, with my hand resting on the stomach, I was surprised at finding the air was expelled from the lungs, in a way different from anything I had ever thought or heard of, viz., by the contraction instead of the relaxation of the diaphragm. This surprise was increased by finding that this mode of breathing was closely connected with the difficulty of utterance, and that whenever I made an ineffectual effort to pronounce a word the air was escaping as in ordinary breathing. When in good health I could control the action of the diaphragm by volition. This, however, did not aid me much in talking; and it was not until my attention was attracted to the fact, that

by gesture we compel this muscle to act in the way that is necessary for producing perfect sound, that I could control the difficulty so as to converse tolerably under all circumstances."<sup>1</sup>

Dr. Findley's theory concerning the action of the diaphragm is at variance with the commonly accepted view. The theory in itself seems a little inconsistent. — If, during expiration, the diaphragm is performing its secondary contraction (*i.e.* is diminishing its diameter), then it cannot arch itself till inspiration occurs. But during inspiration Dr. Findley has the primary contraction going on<sup>2</sup> (*i.e.* the diaphragm is flattening), and the arching movement is in no way accounted for. But in any case, the precise connection between gesticulation and diaphragmatic action is somewhat obscure. And if the connection were more patent, it would still be necessary to demonstrate a causal relation between speech-disturbances and indisciplin of the diaphragm. Thus the evidence in support of gesture is not very convincing.

The older argument, that gesture diverts the speaker's attention from his impediment, may have some weight. But this would scarcely make gesture

<sup>1</sup> A third argument in favor of gesture is presented by Rouma ("La parole et les troubles de la parole," pp. 106 ff.), who holds that cerebral activity overflows from the arm-centres to the speech-centres.

<sup>2</sup> "Both in breathing and in making sound, we inspire by contracting the diaphragm."

a universal and unfailing remedy for stammering. Gesture, *per se*, however, has nothing to condemn it.

Concerning the various automatisms — fumbling buttons, jingling watch-chains, and so on — it is interesting to note that the average teacher of stammerers endeavors to suppress them rather than foster them:

“If the pupil has a tendency to rock his foot or twiddle his fingers, I try to arouse his sense of manhood and self-mastery to the cessation of such actions.”

The cultivation of automatisms is certainly futile. The same arguments are made for them as for gesture, and (assuming the arguments to be conceded) gesture is unquestionably to be preferred. But while it is futile to foster automatisms, it does not necessarily follow that there is justification for their deliberate repression. Automatisms in mature persons are usually indicative of a nervous condition, but this condition is not removed by enlisting brute-will to inhibit symptomatic reactions.

We shall consider now an expedient of some historical interest. This is the so-called “Leigh method,” which was a canard nearly a century ago. The method consists in keeping the point of the tongue in contact with, or near, the palate during speech.

The exact origin of the method is a little obscure. —

Mrs. Leigh, an Englishwoman, was governess to the daughter of Dr. Yates, of Albany, New York. The doctor's daughter stammered, and Mrs. Leigh applied her notorious "method" to combat the impediment. One version has it that Dr. Yates invented the method, and imparted it to Mrs. Leigh in the interests of his daughter; and that he subsequently appointed the governess as the head of a stammering-school. The other version has it that Mrs. Leigh herself contributed the method, and that Dr. Yates assumed credit for its invention. According to the latter version, Dr. Yates had no connection with Mrs. Leigh's institution.

The former version is upheld by Dr. Warren :

"The inventor of Mrs. Leigh's system, Dr. Christopher C. Yates, of New York, a medical gentleman of high talents and very strong natural powers, had a daughter afflicted with stammering. After attentive observation and a long study of her case, he succeeded in hitting upon a method which effected a cure. This method he imparted to the young lady's instructress, Mrs. Leigh, an Englishwoman, in order that it might be pursued during school-hours.

"The inventor soon determined to extend its benefits to others. Finding Mrs. Leigh enter into the scheme with zeal and ability, he placed her at the head of the institution; and, fearful of the reproach of empiricism, he chose that it should pass under her name."<sup>1</sup>

<sup>1</sup> "Remarks on Stammering," *American Journal of Medical Science*, Boston, 1837. Quoted by *The Voice*, Vol. IV, p. 96.

The version of Bansmann<sup>1</sup> and Zitterland is that the deceased husband of Mrs. Leigh had been a stammerer, and that through this circumstance Mrs. Leigh had come by her knowledge of the remedy she employed. At any rate, the "Leigh method" seems to have been identical with that plied by Broster in England, and invented by him (according to his own version) shortly after the year 1800. Relative to this matter the following paragraph by Dr. Julius is of interest :

"It will be known to some of our readers that Mr. Broster, now of London, and formerly of Liverpool and earlier of Edinburgh, has for some years conducted a very successful stammering-school. His method, concerning which the pupils are bound to secrecy, probably consists in some trick to be applied during speech. Either the method is successful in a few days (as is usually the case) or it fails altogether. Mr. Broster is said to have learned the method from a poor man in Edinburgh. This method has been transplanted from Liverpool to New York."<sup>2</sup>

Neither Mrs. Leigh nor Dr. Yates has left a written record of the system they employed; hence only indirect accounts of the method are available. The secret of the system was, however, bought by

<sup>1</sup> See Otto, "Das Geheimniss Stötternde und Stammelnde zu Heilen," Halle, 1832.

<sup>2</sup> *Magazin der ausländ. Literatur der gesammten Heilkunde von Gerson und Julius*, Vol. XV, p. 93. Quoted by Hasse, "Das Stottern," Berlin, 1846.



M. Malebouche, of Paris. Later, through the intervention of Mr. Cox-Barnet, American consul at Paris, M. Malebouche purchased his release from his pledge of secrecy. He thereupon communicated the method to the *Académie des Sciences* (1827), and had the system described by M. Magendie in the latter's article "Bégaiement," in the *Dictionnaire de Médecine et de Chirurgie*. Later Malebouche himself published an article on the subject in the *Dictionnaire de la Conversation et de la Lecture*, and finally wrote his "Précis sur les Causes du Bégaiement et sur les Moyens de le Guérir."

All of this may seem irrelevant, but we are dealing again with a method that has numerous modern inventors, and that threatens (in America at least) to come once more into prominence.

Concerning the Leigh theory, Malebouche says:<sup>1</sup>

"The observations giving rise to the method were as follows: Persons that speak fluently have the tongue constantly applied to the palatine arch; stammerers, on the contrary, have the tongue continually in the lower part of the mouth. The stammerer must therefore execute two movements in order to articulate — one to raise the tongue and close the outlet for the elementary sound, and the other to modify this sound. Herein the stammerer resembles a flutist that neglects to place his fingers on the stops while playing his instrument — the modifying movements do not correspond to those necessary for the production of the elementary sounds. These facts have

<sup>1</sup> "Précis sur les causes du bégaiement," pp. 10 f.

given rise to a system of exercises to train the stammerer to keep the tongue always in the region of the palate."

Haase gives the following summary of the Leigh method and theory:<sup>1</sup>

"Madam Leigh observed that with stammerers the tongue lies deep in the mouth when the speech-defect is in evidence; whereas with normal-speaking persons the point of the tongue remains in contact with the hard palate. She therefore concluded that the speech-defect would disappear if the stammerer persistently raised the point of the tongue and pressed it against the palate. She required those afflicted to move the point of the tongue upward and backward, and to thrust the tongue rapidly from this rearward position far out of the mouth, then immediately to withdraw it. These movements were performed six or a dozen times, and the exercise was repeated at frequent intervals till the required dexterity was obtained. The frænum was pulled and manipulated while the tongue was held in an elevated position. Mrs. Leigh further directed that the tongue should at all times be kept in contact with the front part of the hard palate or the upper gums. This rule was to be observed even when the pupil was not conversing. At night a roll of wet linen was kept under the tongue to prevent it from sinking to its low position."

Frau Hagemann and a number of other European teachers employed the Leigh method. We quote Frau Hagemann:<sup>2</sup>

<sup>1</sup> "Das Stottern," p. 84.

<sup>2</sup> "Die Untrügliche Heilung des Stotter- und Stammel-Uebels," pp. 12 f. and pp. 16 f.

"Investigation has revealed the fact that the stammerer's tongue is usually (and especially when he is not engaged in speech) far removed from the position it occupies with normal-speaking persons: the tongue *lies* in the lower part of the mouth, in the lower jaw, in fact. The result is that the tongue-ligaments (*Zungenbänder*)<sup>1</sup> gradually become relaxed, so that the tongue often fails to perform its function. . . .

"The remedy in its entire simplicity but splendid efficacy is this: Always to keep the point of the tongue directed toward the upper part of the mouth and in contact with the palate; and during silence to keep the whole tongue to the palate with the point in contact with the upper incisors, or better still, in contact with their roots. The point of the tongue must never leave this position.<sup>2</sup> To explain better the normal position of the tongue, one might say that it occupies the position required for swallowing saliva."

The foregoing paragraphs should make plain the nature of the expedient.

The procedure has been somewhat modified by different teachers. According to Colombat:<sup>3</sup>

"Malebouche modified the American method by requiring the stammerer to apply the entire upper surface of the tongue to

<sup>1</sup> Probably meaning *Zungenband* (*frænum*).

<sup>2</sup> If the point of the tongue were not to leave the palate, the speaker would be unable to pronounce the linguals. The author is apparently striving for emphasis. The version of Malebouche, Haase, and most other writers is that the stammerer must keep the tongue to the palate "in imitation of the normal speaker." The tongue must start from the palate, and manœuvre in the upper part of the mouth.

<sup>3</sup> "Orthophonie, oder Physiologie und Therapie des Stotterns," p. 51.

the palate instead of merely the tip, as advised by Mrs. Leigh."

Colombat's recommendation was that at the beginning of treatment the pupil should pronounce difficult words with the *under* surface of the tongue applied to the soft palate a short distance in front of the uvula. A few modern teachers recommend the use of the under surface of the tongue (though in a more anterior position) for the lingual consonants.

After noting these modifications it will be interesting to observe that a few investigators have recommended a low or central, rather than a high, position of the tongue :

"Now, I know (though I have not seen it) that your tongue flies about in your mouth. It did in mine: it always does, because it is trying to do the work which the lips should do. So get into the habit of determinately keeping it down. You will find it easy enough after a while. But at first, when you speak and read, always be sure that you can feel your lower teeth against the tip of your tongue." <sup>1</sup>

A second writer agrees:

"The tongue, that unruly member, which flies about so wildly in the mouths of stammerers, must be kept in control, and, as Canon Kingsley justly remarks, must be kept low down in the mouth, touching the front teeth; but yet, when we wish to join any of the consonants, except the true labials, it must perforce be called into requisition."

<sup>1</sup> "Charles Kingsley: his Letters and Memories of his Life," Vol. II, p. 261.

A third writer disagrees:

"The tongue should never, in speech, be protruded between the teeth; it should never touch the lower teeth; it should never be pointed downwards to the bed of the jaw; it should never be thrust up in the palatal arch, as in the act of sucking; nor should the point of the tongue in any action deviate from the centre of the mouth."

Here the stammerer has quite a choice of expedients. However, he would doubtless do well to ignore them all, and pay no particular attention to lingual position.

It is remarkable that such an expedient as the "Leigh method" should ever have received serious consideration. The method is a procedure without a purpose. Dr. Müller justly characterized it (shortly after it was introduced) as "a blind groping in the dark, in which neither teacher nor pupil knows what he is about."<sup>1</sup> The whole thing is so utterly aimless that one cannot even undertake a systematic criticism. Malebouche, who seems to have paid more attention to labial action than lingual position, himself admits that any number of people (*une infinité de personnes*) carry the tongue in a low position, but do not stammer.<sup>2</sup> He further states that with stammerers "this difficulty in carrying the tongue to the palate does not exist: they can carry the tongue there whenever they will."<sup>3</sup>

<sup>1</sup> "Handbuch der Physiologie," Vol. II, p. 243.

<sup>2</sup> "Précis sur les causes du bégaiement," p. 11.    <sup>3</sup> *Loc. cit.*, p. 15.

The facts seem to be that a "low tongue" is no commoner among stammerers than among normal-speaking persons. Under these circumstances it is difficult to understand what the recommended procedure was intended to accomplish. The few cures effected — and there are always cures, however bad the method — must have been largely due to the removal of fear and inhibitive auto-suggestion.<sup>1</sup> Further, most teachers that employed the method made use of various accessory measures that were decidedly rational, and these measures undoubtedly benefited the stammerer. The tongue-exercises may have established clearer kinæsthetic images of lingual movements, and may thus have facilitated vowel-production. The attention paid to respiration would, of course, combat certain vicious forms of physical stammering; and "continuity of sound" (thought) — which even Mrs. Leigh seems to have enjoined — would exert its usual beneficial influence. These measures would account for what few cures were effected, and thus explain the brief popularity that the system enjoyed.

<sup>1</sup> Thus Frau Hagemann in 1845: "Sometimes the cure is instantaneous, for the difficulty is largely one of suggestion (*Einbildung*), and when the stammerer finds himself at once free from his impediment, he becomes convinced that what was formerly regarded as an organic defect or an inexplicable affliction was nothing more than a bad habit." ("Die Untrügliche Heilung des Stotter- und Stammel-Uebels," p. 20.)

Little need be said of the modification of the "Leigh method." What has been said of the method itself can also be applied to its variants.

The practice of keeping the tongue in a low or central position has not been recommended as a panacea for stammering, but rather as a mode of comportment; hence further comment regarding these measures may be omitted.

The Broster-Leigh-Yates-Malebouche-Hagemann method persists—despite its antiquity and futility—in bobbing up as somebody's original and infallible discovery. The method is employed by an American stutter-doctor as "The one cure for stammerers—entirely new—perfectly sure: the only scientific, natural, perfect, permanent remedy for stammering, stuttering, lisping, tongue-tied talk, and all impediments of perfect speech."

"Matchless comfort [exclaims the "doctor"], that we intelligently and conscientiously rest in the assurance, born of ample experience and the actual handling of all phases of speech defects, that no case is beyond the reach of our skill, which we do sacredly esteem a gift from God for earth's afflicted ones. How great the privilege and how sweet the reward" . . . et cetera, et cetera.

The "doctor" has recently written a book on the system. By way of recreation we may as well review it. The book is printed in head-line type, and

sells for ten dollars. In a circular the author tells about it:

"The Secrets of the ——— method of Curing Stammering and other Speech Defects, told at last. . . .

"The ONLY SYSTEM that removes THE CAUSE and really CURES, now perfected, and given out in this Book that puts a big NOTCH in the First Quarter of this Century of Wonders.

"This Book actually carries EIGHT DISTINCT DISCOVERIES, wrought into a System that is at once Scientific and Practical; for FORTY YEARS, TRIED-OUT in every particular. Here are its discoveries: The Regulating Principle of Right Speech: the ONE CAUSE of ALL SPEECH DEFECTS; how to remove the CAUSE and give perfect speech; a New and Improved System of Phonetics; how to give speech to Paralyzed Tongues; how to change the Tone and Quality of the Voice from Guttural or Palatal or Nasal, to silvery sweetness; how to alter the Brogue of any Foreigner to pure English; how to use the ——— Method in teaching the Deaf-and-Dumb to talk.

"All these discoveries are woven into a Web of Beauty in this Book on the True Philosophy of Speech. It is a Text-book, a Drill book, a Self-teaching System and a Sovereign Remedy for all the defects of speech it explains, all in one.

"With this Book, Mothers can stop the FIRST BEGINNINGS of all kinds of speech troubles and CORRECT ANY UGLY SPEECH HABIT that may be contracted by their children. Knowing the CAUSE and CURE as plainly revealed and expounded in this Home Instructor, mothers can be COMFORTABLY SURE of NEVER HAVING STAMMERING CHILDREN or CHILDREN AFFLICTED IN SPEECH IN ANY WAY WHATEVER. Blessing beyond all thought."



The author continues :

"When this book goes forth, its secrets are no longer his. When the First Edition is sold, he will count himself paid for his property, so far as Dollars go, and henceforth he will help any who buy the Book to qualify as Teachers of the System. There's room for Thousands and there are Millions of money in it."

Let the reader note the full significance of this last paragraph, and picture to himself the unlimited man-baiting in which these new slot-machine stutter-doctors would indulge.

But to the book! On the title-page we read :

"THE METHOD AND MATTER IN THIS BOOK NOT FOUND IN ANY OTHER BOOK. EVERY PAGE, PARAGRAPH AND PRINCIPLE ENTIRELY NEW."

Among other persons, the book is dedicated —

" To Mothers, who, in a serious sense of their responsibilities, would love to qualify themselves to prevent and cure, in their own dear children, any defect of speech that may intrude itself among them, to hinder their education and keep them back in life. With this book in the Home, Mothers will be able to ' nip in the bud ' every rising impediment — ready with club in hand to kill the little snakes before they grow to be big ' rattlers. ' "

The Method can be applied to all classes of defects and infirmities — to stammering, lisping, " tongue-tied talking," " baby-talking," paralyzed tongues, hare-lip

and cleft-palate speech, dumbness, and the "brogue of foreigners." All for ten dollars !

And the great secret principle is this :

" 1. Right speech is the result of the coördination of two distinct, but related movements — the vocal movement and the organ movement.

" 2. The Tongue is the special Agent or Instrument of this essential coördination.

" 3. The Tongue is qualified to act in this essential capacity by being rightly located, carried always in the roof of the mouth, the end resting on the upper gum-ridges, which should always be thought of as the TALK-PLACE for the Tongue.

" 4. The Tongue being thus rightly located, secures this coördinate movement of the other organs and the voice, by taking the Initiative in speech, which it does by moving off from its place of rest and carriage, on the Upper Gums.

" 5. This start for speech made by the Tongue, by this movement from its place of rest and carriage, signals to all the senses and instincts that control both the organs and the voice, when to move for speech.

" 6. It is in this way that the other organs of speech and the voice are moved to follow the lead of the Tongue, all harmonizing in perfect speech.

" 7. The Tongue is thus seen to be the main organ of speech, the one that rules, but the throne from which it rules is the right, natural high location, before described.

" 8. And thus it develops that the Regulating Principle in Right Speech is this : The Tongue makes the start for speech by moving off from its high place of carriage on the Upper Gums. This indicates the time of the utterance. The Tongue, in this manner, ringing the bell or sounding the gong, as it were, calls the organs and voice into play, and all blend into easy, graceful utterance.

## 196    SYSTEMS OF TREATING STAMMERING

"9. It follows, also, that if the Tongue by any means forsakes this right high carriage-place, and habitually beds in the bottom of the mouth, it is, thereby, disqualified for leadership, being in the wrong place to take the initiative in speech; and there is consequent confusion and a lack of that coördination of organs and voice that is exhibited and illustrated in perfect speech.

"10. And, therefore, it is clear to demonstration, that a dislocated Tongue, a tongue carried low instead of high, in the bottom of the mouth instead of in its roof-story, is the ONE CAUSE of all speech-defects. Yes, of them all. . . .

"But whatever the phase or degree of the impediment, the essential feature of the remedy, for one and all, is, To get the tongue up out of the bottom of the mouth. Other things may be needed to tone and sweeten and train the voice, but the one essential requirement for the correction of all classes of impediments is To locate the tongue aright, and to educate it to right use from that right location. And this is but to restore Nature. Every right born human begins life with his tongue up, sucked up into the roof of the mouth. And, therefore, stammerers and all other defective talkers have simply lapsed from Nature. The first thing to be done, therefore, and the main thing, is to take them back to Nature."

This principle "enables careful stammerers, that are not of the 'Helpless class,' to avoid stammering, almost from the first lesson — certainly as soon as they can perfectly say the letters of the Alphabet, End-tongue, that is, as the tongue begins its movement from its place on the gums. This is something great."

"Carrying the tongue up is nature. It is what every good talker does. It is what every natural-born child comes into the world doing, in pure instinct. It is philosophy. It is science. It is sense. . . .

"All the stammerers that have ever made good talkers, from old Demosthenes, who put pebbles under his tongue, to the bright Western Horse-woman that cured herself by clucking to her saddle-horse and popping her tongue loose from the palate of her mouth, after sucking it up — all took the same route you are travelling, consciously or unconsciously, purposely or accidentally. **THERE IS NO OTHER WAY.**"

The following exercises help to keep the tongue at the Talk-place :

"1. Suck the Tongue up — holding the End to its place on the Upper Gums, suck the whole of it up against the palate.

"2. Suck it up, as before, and Pop it loose, repeatedly.

"3. Suck it up, and then close the mouth, keeping the Tongue in place.

"4. The Act of Swallowing lifts the Tongue to place, precisely.

"5. Placing the Tongue aright, open and close the mouth, without moving the Tongue from place.

"6. Practice the Horse-Cluck, sucking the Tongue up and Clucking out at the side of the Tongue, as you would cluck to a horse.

"7. Establish the habit of Sleeping with the Tongue Up, lying on the Right Side and Keeping the Mouth Shut. If necessary, tie a Knotted towel about the waist, Knots at the back; and a bandage under the chin and over the top of the head.

"8. Constancy of Attention to the Carriage of the Tongue is Indispensable. Count the Bottom of the Mouth Forbidden Ground for the Tongue.

"9. Adopt as the Motto for the Tongue: UP, ALL UP, ALWAYS UP, and EASY UP."

## 198      SYSTEMS OF TREATING STAMMERING

Other interesting diversions are "End-tongue Wording" and "Side-tongue Wording." In "End-tongue Wording" you say "ta" before lots of words. In "Side-tongue Wording" you say "ya" instead:

"Say 'ya, ya, ya,' repeatedly, pressing the Tongue hard to place.

"Put 'ya' before the letters of the Alphabet, holding the 'ya' before sounding the letter, to allow time for pressing the Tongue to place.

"Read whole pages in a reader suited to the advancement of the student, placing 'ya' before each word, holding the 'ya' as before.

"Next, Side-tongue Word, page after page, holding the Tongue in the ya-place, but not saying 'ya.'"

As an advanced exercise the student may place "the best of all Double Syllables, which is 'ya-ta' before each word; sounding the word quickly after 'ya-ta.'"

"Any careful person could cure himself simply by repeating 'ya-ta'; for it requires the essential double-action of the tongue.

"Read whole pages fluently along, Side-Tongue, without any prefix; slowly at first, and, then, faster and faster. Avoid all effort. See how easy. Here is where we reach Natural Fluency. . . .

"End-tongue utterance is nature. . . .

"Side-tongue utterance is nature. All good talkers not only use their tongues like bell-clappers tapping on the gums in the ta-touch, but they carry them in speech spread out from side-to-side, in touch on both sides with the upper side jaw teeth, in what has been described as the ya-carriage. . . . The ya-carriage makes the ta-tap easy."

The Method, as already stated, cures other ills besides stammering. — As regards lisping and “tonguetied talking”:

“These have been classed with stammering, because, while illustrating different degrees of lowness as to tongue-carriage, the remedy is the same — get the tongue up and use it from up instead of from down.”

Baby-talking “indicates that the tongue was heavily down in the earlier years of childhood, so that sounds could not be successfully imitated, in the usual way that children learn to talk. Hence, some one or more of the elemental sounds were never said. . . .

“The Tongue must be restored to its right Carriage-place in the roof of the mouth, the end resting on the upper gums. . . .

“The other essential is Right Phonetical Instruction and Training.”

Any difficulty with sibilants is removed if one keeps the tongue from “punching” the front of the mouth.

“Cleft-palate always, and Harelip, not infrequently, causes broken speech. In the case of the former, the tongue will not rest in the chasm or opening above, and, hence, drops from its right high carriage to the bottom of the mouth.”

It is desirable to have “rents and leaks” closed by a silver-palate or through a surgical operation,—

“But none of these devices are absolutely necessary to the perfection of speech. With the fissure uncovered, more and longer work will be needed to attain the same results; but the  
—— Method compasses the difficulties presented by the

open palate and confers perfect speech, despite the disadvantage."

The patient may obtain "sweet, silvery, musical speech, one of the supreme accomplishments and distinctions of the method embalmed in these pages."

And now the method is ready for another errand of mercy. Paralyzed tongues lie prostrate in the bed of the mouth. —

"This must be received as an impressive confirmation of the ground-theory of ——— Philosophy, namely, that the dislocation of the tongue from the top to the bottom of the mouth, is the direct CAUSE of all defects of speech."

The cure is easy. The paralytic just puts the tongue up, using his "hidden powers." If this fails, he wears a Dental Plug to raise the tongue. He then reads by day and continues to wear the plug by night. After some time, if the plug has not been swallowed, and thus by great good fortune the patient is still available, the instrument is removed. The tongue may then "take the hint, so to speak, and finding its right place and use, will get back to the old feeling of 'being back home' and, if so, natural muscular energy and natural suction may be relied on, jointly, to do the rest."

And though all this fail, we need not despair. The problem admits of solution:

"Substituting the upper teeth for the upper gums, and the body of the tongue for the end of it, the upper teeth can be drawn

backward and inward, and down on the tongue, as it lies prostrate on the bed of the mouth, the tongue rolling up somewhat by prizing against the front teeth, and in this manner the essential contact between the tongue and upper jaw can be made."

The author admits that speech thus obtained is "nothing to look at." But the motto of the Method is "Something for all that are afflicted in speech," and "the Method glorifies itself in conferring speech upon paralyzed tongues."

Foreigners with "brogue-blemished" and "dialect-marred" speech, and native Americans that "flare the controlling vowel sounds" must carry the tongue a "little above normal height," and must be taken through a course of phonetics. Foreigners thus acquire "Linguistic Naturalization," and thence may aspire to "places of prominence in business or in religious and social life." Renegade Americans apparently receive absolution and remission of sins.

In regard to deaf-mutes —

"It has been commonly supposed that the want of hearing is the sole cause of their speechlessness. But this cannot be true." The deaf-and-dumb carry a low tongue, and "causatively considered, this shares with deafness the blame for dumbness." These unfortunate persons must also carry a high tongue and study phonetics. Tongue-speech will then be acquired. "This will not come with the next breath, to be sure, but it will be realized in 'the happy time-to-come,' near or far, nearer or farther, according to several things."



Our author devotes a chapter to inveighing against "false and fakish" and "mongrel" methods. He deplores the fact that "just anybody will do for a 'Professor' or 'Principal.'" His judgment is that "Brass, more than brains, qualifies," in which opinion the reader will doubtless concur. He says that so-called "Cures for Stammering" are tricks and devices for "deceiving the incredulous"(!), and holds that they should not be classed with the Only Method. "All other methods," he declares, "are but schemes of robbery."

And now the peroration :

"It is the Author's fond hope and confident belief, that in this Manual he has but laid well and deep the solid foundation for a structure of imposing magnificence, in the coming years, after others shall have contributed their thought and labor and skill, to a Department of popular and polite education, that, hitherto, has been shamefully, if not, exclusively, in the hands, and under the tutelage, of quacklets and charlatans.

"The revelations that go out with the issuance of this novel Monograph will set men to thinking in right lines, about the Physiology and Psychology and Pathology and Practical Execution of Speech. The thousand and one guesses as to the CAUSE of stammering and other imperfections of speech will give way to the ONE CAUSE of all, as it has been proven and given out in the foregoing pages.

"Spurious methods have had their day.

"This Book dates the birth of a New Science and a New Art, and bequeaths to the Schools and Colleges and Universities of our Country, first, and of the whole World, in the near future, a New and Needed Department of Education.

"Moreover, unpretentious as it may appear, this Book is destined to draw the eyes of the world to a New Field for the exploits of Statesmanship and the exercise and gratification of Christian Beneficence."

Our author is undoubtedly ingenuous, for he tells us that he "humbly and honestly craves to yield his life in an unselfish ministry to God and his fellow men." We can proceed, then, to a commentary on the views he expresses. — In the first place, it is evident that the "doctor" is selling us nothing new. He is dispensing the Broster-Leigh-Etc. "method" without modification. He does not explain how the particular artifice is to inhibit stammering. When he speaks of causes he usually resorts to allegory. The tongue must "rule" from its "throne" in the "roof-story"; otherwise it is "disqualified for leadership." It must "ring the bell" or "sound the gong" to call the "organs and voice into play."

One hardly knows how to regard this kind of argument; and when he remembers that the book professes to be scientific, he is almost led to conclude that his intelligence has been impugned. — The tongue "rings the bell" and calls the "voice into play." But what of sonant consonants, in which the voice *precedes* articulation? The matter is difficult to comprehend. The author himself is befogged at times, and resorts to the plea that "every science has its mystery," and that his Science is no exception.

At times he is even discouraging. He mentions a "Helpless Class," which seems to be a sort of skeleton in the closet. He says, too, in reference to the cure, that "it is vulgar and contemptible, to be asking, 'How much time will it take?'" But elsewhere he tells us that to effect a cure the Method takes "hours . . . days, weeks, months or years, according to the degree of responsiveness of the organs and the degree of attention given to it." *Years!* Now we are coming to it. The number of years is undoubtedly directly dependent upon the pupil's longevity.

We need scarcely comment upon the efficacy of the "high carriage" and the "ta-tap" as remedies for hare-hip and dumbness. Here we may be dealing with a joker. And perhaps the whole thing is nothing but a *jeu d'esprit*, a culminating hoax in celebration of the centenary of the Leigh method. But if we fail to see the point, we may at least feel relieved when the author admits that he has "embalmed" the Method in his pages.

We turn now from one of the poorest expedients ever introduced into the therapy of stammering to one that is undoubtedly among the best. This measure, which is effective chiefly as a preventive of physical stammering, is physical relaxation and suppression of physical effort. This particular remedy is embodied in practically every system of treatment that possesses merit.

Physical relaxation has long been employed in the therapy of stammering. Thus Hofmann, who wrote in 1840:<sup>1</sup>

"The patient must use no muscular effort in the throat, tongue, or lips. Further, he must avoid working other parts of the body, such as the arms, feet, etc. All of this simply aggravates the trouble, while it seldom affords even temporary relief. Its tendency is to check immediately the respiratory and vocal stream. The utmost relaxation of the body must prevail during speech, for effort necessarily impairs the attention, which both in speaking and reading should be directed to the voice. Effort, therefore, confuses the senses, induces hurry, and brings speech into execution before thought is prepared: in this way it occasions stammering."

Relaxation is employed in a majority of present-day stammering-schools. The oft-repeated injunction is, "Use no effort," "Devitalize the muscles of speech," "Relax the muscles of the throat," "Sigh the word out," "Talk with indifference," etc.

In a few institutions relaxation-exercises are employed. They are typically as follows:

#### RELAXATION-EXERCISES

Sit or recline in a comfortable chair.

1. Relax the muscles of the body.
2. Contract the muscles of the arms: keep them contracted for several seconds. Relax them for an equal period. Contract them; relax them; etc.

<sup>1</sup> "Theoritisches-praktische Anweisung zur Radical-Heilung Stotternder," pp. 25 f.

## 206      SYSTEMS OF TREATING STAMMERING

3. Contract and relax the muscles of the right arm in the manner described in the former exercise.

4. Similarly with the left arm.

5. Contract and relax the muscles of both legs.

6. Of the right leg.

7. Of the left leg.

8. As far as possible, contract all the muscles of the body. Relax them; contract them. Rest with the muscles relaxed for several minutes. Rest in this manner at frequent intervals during the exercises.

9. Relax the muscles of the neck and allow the head to sink upon the chest. Raise the head and strongly contract the muscles of the neck. Gradually relax the muscles and allow the head to sink. Etc., etc.

10. Relax the muscles of the neck and allow the head to sink to the right. Raise the head and allow it to sink to the left. Etc., etc.

11. Raise the head with the least expenditure of energy. Repeat the vowels and perform simple vocal exercises. Use the least possible effort.

12. Repeat the alphabet, speaking in a listless and non-chalant manner.

Etc., etc.

These exercises doubtless have merit; but the real value of relaxation lies in applicability to speech, and its ability, when applied during speech, to eliminate physical stammering.

Dr. L. Sandow has developed the principle of relaxation as a system in itself.<sup>1</sup> His ideas are so original and interesting that they well repay con-

<sup>1</sup> "Mechanik des Stotterns."

sideration. His theory is that the young child vocalizes and articulates only when stimulated by feelings of ease and physical comfort (*Behagen*). This physical comfort and relaxation must be cultivated by the stammerer, since it is the condition naturally favorable to speech, and is moreover favorable to the recovery of injured speech-nerves and the presumably injured motor speech-centre of the brain. The following excerpts express Dr. Sandow's ideas. They are taken from his excellent little work, "*Mechanik des Stotterns*."

"In his cosy little bed the child feels extreme physical comfort. Under these conditions his attention is confined to the world of feeling; and when the physical well-being reaches its highest point, the nerves and muscles — rendered excitable by inheritance from preceding generations — produce responsive movements in an unconscious and almost reflex manner. The child produces a speech-sound, an *abu*, for instance; and this he probably utters a second and a third time. After a while the child turns his attention to the pleasing sound; that is, his attention turns from the world of feeling to the world of hearing. When the sound has fallen upon his ears, his attention is again attracted by the warmth of his bed to the world of feeling. Once more the sound is produced; once more the child listens, — and so on. If the child is reminded of the sound at some later time, it is not necessary for the physical comfort to reach its former intensity. The pleasing thought of the sound enhances the child's comfort to the necessary point; and when this is reached, the sound is produced spontaneously. In this manner the auditory word-centre is brought into relation with the nerves that effect the speech-

movements; *i.e.* with the motor word-centre. As with the child, so with the adult. It is not at all necessary to suppose that sound finds any other path to the speech-organs than that opened to it by the physical well-being. With the adult, pleasure and mood stand in the same definite relation to interest in speech as they do with the child. When we feel contented and at ease, we start chattering at the least occasion. But if we feel depressed, even a real interest in a subject will elicit nothing but a few scanty monosyllables.<sup>1</sup> . . .

"An unbroken stream of words seems to depend simply and solely upon the existence of the corresponding thought and a sufficiently strong feeling of physical ease. When the well-being is great enough, we have only to think the train of thought, and the motor apparatus reproduces it automatically almost before we are fully aware of what has taken place."<sup>2</sup>

Our author then goes on to explain the manner in which fear and physical discomfort (*Unbehagen*) come to replace physical ease (*Behagen*) in the stammerer. This is the direct effect of the stammerer's inability to speak. Dr. Sandow supposes that the speech-disturbances are due to injury to the speech-nerves and to impairment of the motor speech-centre of the brain. He supposes that these conditions are aggravated by the stammering, and that the stammering thus prevents reparation of the physical injury. Concerning the remedy for these conditions, he says:

<sup>1</sup> "Mechanik des Stotterns," pp. 17-18.

<sup>2</sup> *Loc. cit.*, p. 19.

"Away with the dangerous speech-exercises! The one proper treatment for over-excitable nerves is rest; and this rest should alternate with gentle, natural, and unforced movements, — since these movements further the organic reparative changes. If possible, the patient should enjoy a great deal of sleep, — quiet, restful sleep, undisturbed by dreams. We recommend a short sleep before the midday meal as highly beneficial; but if it is not possible for the patient to indulge in sleep at this time, he should at least follow Hallervorden's excellent precept:<sup>1</sup> 'Rest seems to me to possess an excellent therapeutic value in cases of exhaustion. Therefore I have for some years prescribed rest for neurasthenic patients. I advise the patient to lie practically flat upon his back for five or ten minutes — since this position affords the most relief to the muscular system — and to rest both body and mind as far as possible. I advise him to repeat this from five to twelve times during the day. The few patients that have followed my advice have always thanked me for it, but probably only one in ten has conscientiously fulfilled my instructions.' On no account should one shorten the night's sleep by rising early or retiring late.

"Every stammerer should treat himself — or if too young, should be treated — as a patient suffering from neurasthenia. . . . With every movement that he makes, he should bear this fact in mind. He should execute each movement with the greatest possible relaxation and ease, observing, too, absolute nonchalance and indifference. On the one hand, this physical well-being is the enemy of fear, and its consorts, the various asthenic emotions; and on the other hand, it must from its very nature obviate every strong impulse or innervation. But not *any* kind of slowness (in moving arms and legs) is

<sup>1</sup> "Arbeit und Wille, ein Kapital klinischer Psychologie," Vol. I, p. 40.



implied. There are different kinds of slowness. One person goes slowly because some one in front of him blocks the way. Another goes slowly because he is too relaxed and too much at ease to care about going faster. This second kind of slowness, slowness induced by physical relaxation and well-being, must become the second nature of the patient. (Slowly, and with absolute repose, he raises his hand to lift his hat. Quietly, and with restful movements, he continues his walk, etc.) And why is this restfulness and relaxation so essential? Because slowness and ease of movements, especially of movements of the right extremities, permits only weak innervations to reach the motor nerves of the brain — and especially of the left hemisphere of the brain, in which the speech-centre lies. As a consequence it permits the gradual recovery of the injured nerves. These slow movements, since they entail only the weakest innervations, prevent all irradiation upon the contiguous speech-nerves. One can, of course, move the limbs as much as he pleases, but each movement — especially of the right arm and leg — must be slowly and restfully executed. Ultimately the speech-organs become influenced by this mode of activity, which itself becomes more and more habitual.

“The speech-nerves themselves must be guarded from all excessive impulse. One should speak only in the most nonchalant tone, and endeavor, whilst speaking, to maintain the highest degree of well-being [*Vollbehagen, Urbehagen*] and relaxation. Let the stammerer preserve his physical and mental ease, and have no scruples about separating words and phrases that are ordinarily connected. Let him adopt the manner of a speaker that pronounces his words as they occur to him — with utter disregard for rhetorical effect. The recital or the question then assumes the character of the involuntary, the unstudied, the abrupt. The ease and well-being of the moment alone determines the pauses, the lengthening of the vowels, the inflec-

tion, etc. This restful manner of speech has a powerful effect upon the hearer. It is far more effective than the stringing out of long and wordy sentences. Let the reader try it, and he will soon discover this unforced and restful tone for himself.

"The stammerer need have no fear of carrying this repose and relaxation to excess. The hearer will certainly not find the manner displeasing. And even if this were not the case, the stammerer has to consider himself, and not the hearer. Every speaker has his idiosyncrasies, so why should the patient not have his? — especially as his happens to be the most natural in the world. The patient always has the right (and no reasoning person will gainsay it) to consider himself in the first place, and also himself in the second, third, and fourth; and last of all to consider the hearer just a little. The stammerer should make the most abundant use of this privilege. And let me once more emphasize the fact that this restful and unhurried speech always strikes the hearer pleasantly."<sup>1</sup>

And when the stammerer experiences fear or anticipates difficulty, —

"Let him concentrate his whole thought simply and solely upon the task of living that moment with the greatest possible repose and well-being. Let him relax the muscles of the arms, and as far as possible the muscles of the legs and other parts of the body, — meanwhile permitting the resultant feeling of comfort to come well to the fore in consciousness. Let the stammerer — if he finds it agreeable — slowly raise his hand and stroke it across his face. Let him yawn while performing the act, and then draw a few slow and deep breaths to intensify his feeling of restfulness and indifference. When this feeling

<sup>1</sup> *Loc cit.*, pp. 135-138.

has acquired sufficient intensity, the first few words will flow from the lips of their own accord. At this point the speaker allows a restful pause to supervene, paying no regard to the expectant looks of his hearer. 'I consider first my repose and well-being. Other things must accommodate themselves to the circumstances. And what I have to say is utterly worthless and insignificant compared with my effort to preserve my physical and mental repose.' With thoughts of this kind, and with slow, restful movements, and deep breaths, and occasional yawnings, the stammerer strives only to bring the feeling of comfort again to its former pitch. This reached, a second word — and perhaps a third — flows spontaneously from the lips. And thus the stammerer proceeds till the sentence is completed."<sup>1</sup>

There are many reasons why a procedure of this kind should inhibit stammering. The stammerer that can successfully employ this expedient has established a degree of independence that should render him no more liable to the impediment in the presence of other people than in the privacy of his own room. It is doubtful, though, whether the average stammerer could carry the measure to the extreme that Dr. Sandow recommends. Fortunately this relaxation and composure is beneficial if attained in *any* degree. It is a direct counteractive of physical stammering and the corporeal changes that give rise to fear. It is evident, too, that this physical and mental repose must prevent excessive affluxion

<sup>1</sup> *Loc. cit.*, p. 145.

of blood to the brain, and that it thus probably tends indirectly to preclude amnesia.

There can be no doubt that relaxation diminishes the inertia of the motor speech-mechanism, and that the mechanism is then capable of being actuated by a stimulus weaker than would otherwise be necessary. When the body-muscles are generally contracted — and this condition commonly prevails with the stammerer — the motor cells of the cortex must be continuously discharging into the efferent nerves. It seems that the inertia of the contiguous motor cells — those actuating the speech-organs — is then increased, and speech rendered more difficult in consequence. On the other hand, when the muscles of the body are generally relaxed, there is apparently a diminution in the inertia of the cells actuating the accessory muscles. The result, as already stated, is that the oral articulative mechanism is capable of being actuated by a weaker stimulus; *i.e.* by a weaker auditory or kinæsthetic verbal image. Relaxation would thus preclude stammering in many instances when muscular tension would make it inevitable.

As already remarked, Dr. Sandow's expedient is merely the development of a feature embodied in practically every commendable system for the treatment of stammering. Of the efficacy of the expedient there can be no doubt. It counteracts physical

stammering, fear, and to some extent multiple thought. Dr. Sandow's theory concerning damaged speech-nerves and damaged motor cells is almost certainly erroneous — likewise his theory of their gradual recovery as a result of the procedure advocated. His conception of the functions performed by the various centres is somewhat indeterminate; the kinæsthetic verbal centre is frequently lost in the shuffle. Dr. Sandow's "*Mechanik des Stotterns*" is, however, a splendid work, and it is highly recommended to the reader.

And now a few miscellaneous expedients:

There is a "professor" that marauds around America telling his victims (after the necessary cash-transaction) to grunt before they speak. Stammering occurs — according to the professor — only on the "sounding consonants"; therefore if the stammerer will breathe and grunt before he articulates, no difficulty can arise.

A German expedient, which was recently introduced into England, consists in accentuating the "sense-bearers," or principal words in a sentence (since these alone occasion difficulty!). "*Tell me the truth.*" Accentuate "tell" and "truth" and raise the pitch on these words. "Follow a wave of sound."

The employment of synonyms and circumlocutions is recommended by some teachers of stammerers. If asked your name, you say, "It is spelled —," and

proceed to spell it. Instead of saying, "No, thank you," if some one offers you the mustard, you smile and say, "Another time." — It would be less demoralizing to eat the mustard.

Another device consists in interpolating words and using "starters." "Er-no"; "Why, yes," and so on. This defect is known as *Embololalia* or *Embolophrasia*.

Other remedies are: clenching the fists at difficult words, squeezing the larynx with the fingers, pinching oneself, whistling before difficult words, imitating another person's voice, refraining from speaking, etc.

## CHAPTER VI

### MECHANICAL APPLIANCES, ETC.

MECHANICAL aids are occasionally employed even at the present day in the treatment of stammering. A prominent Russian institution boasts an "orthopædic therapeutic speech-apparatus" that "facilitates the mechanical action of speech" and "renders stammering impossible."

In America we find a sponsor for the electric battery and coil. The electric apparatus is attached to a belt and worn next to the body. The wearer presses a button and receives a monitory shock when he feels inclined to stammer.

In current works we read of knotted towels and head-bandages to be worn at night to keep the tongue in its "high position"; and of paper-knives, silver hooks, pencils, and knitting-needles to correct faulty articulation. And occasionally we read that the stammerer may cure himself, like Demosthenes, by speaking with a mouth full of gravel.<sup>1</sup>

As a substitute for gravel, one may use gutta-percha balls:

<sup>1</sup> Demosthenes probably never stammered; his defect seems to have been lallation.

"To make the balls, take a piece of gutta-percha and put it in boiling water till it is quite soft. Break a piece off large enough to make a good-sized ball—the larger the better[1]. Wipe it dry; roll it between the palms of the hands till it be perfectly round. Put it in cold water to cool; it will otherwise flatten by its own weight; make another in the same way. Make two smaller balls—four in all.

"To use the balls, put one of the smaller ones in the mouth between the teeth and the gums; put the other small one in on the other side; put the larger balls in front of the smaller ones. Speak with the balls in the mouth.

"The object is to handicap the speaker and make him strive after power. It does not render speaking impossible, but much more difficult. The practice is preferable to the use of corks between the teeth."

The use of cork between the teeth was recommended by Charles Kingsley. In a letter to Miss —, he says:<sup>1</sup>

"If you find it difficult to speak with your mouth open (and it will very likely give you pain in the ear at first, but only at first), get a bit of cork, cut it about so thick (—), and put it between your back teeth, and speak so. . . .

"You *must* practise reading out loud to yourself, opening your mouth at the vowels as wide as you can, and perhaps keeping the cork in at first, till you have made a habit of it."

Kingsley is still cited at times as authority for this procedure.

Devices for relieving expiratory pressure are some-

<sup>1</sup> "Charles Kingsley: his Letters and Memories of his Life," Vol. II, pp. 260-261.



times encountered. "Bates' Appliances" may be cited as examples, though probably none of these particular instruments have been foisted upon the public within the last twenty years. "Bates' Appliances" were invented a little more than fifty years ago by an American, and at the time, of course, were infallible in curing stammering. The following report describing the implements is by "The Committee on Science and the Arts" of the Franklin Institute :

"REPORT ON INSTRUMENTS FOR THE CURE OF STAMMERING

"The Committee on Science and the Arts, constituted by the Franklin Institute of the State of Pennsylvania, for the promotion of the Mechanic Arts, to whom were referred for examination, 'Instruments for the Cure of Stammering,' invented by Mr. Robert Bates, of Philadelphia, Pennsylvania — REPORT :

"That much discrepancy of opinion has prevailed as to the cause and consequent treatment of stammering. Many of the earlier writers have attributed all the varieties of this form of defective speech to some organic affection of the vocal apparatus, or malformation of the parts that compose the mouth and fauces ; as, for example, hypertrophy of the tongue, a low position of that organ in the mouth, enlargement of the tonsils, uvula, etc. The treatment, based upon these erroneous and limited views as to the cause, was necessarily as various as it was unsuccessful. Thus rollers were placed under the tongue, to obviate its fancied depression (Madame Leigh's treatment) ; the tonsils and uvula were excised, deep gashes made in the tongue to lessen its size, etc. Others, again, traced the defect to a want of nervous power in the tongue, occasioned by paral-

ysis of the ninth nerve, and attempted to overcome it by the use of stimulating masticatories, electricity, etc.

"In all these instances it is obvious that a *special* was mistaken for a *general* cause.

"A more accurate knowledge of the anatomy and physiology of the organs of phonation led to an improvement on the above restricted conjectures. . . .

"Mr. Bates, by an independent course of investigation and observation upon himself and others laboring under stammering, has arrived at the same conclusion concerning the difficulty to overcome, as is entertained by the modern physiological school.

"The instruments invented by him are all based upon the same principle, and, in the opinion of the committee, are more efficient in obviating the vocal defect in question than any other contrivance or method with which they are acquainted. As the spastic difficulty obviously accompanies different sets of letters in different persons, Mr. Bates has invented three varieties of instruments, as applicable to all the forms of stammering; all have the same object in view, however — the maintenance of an uninterrupted current of sonorous breath.

"His instruments are as follow:

"1. A narrow, flattened tube of silver, seven-eighths of an inch in length, very light, thin and smooth. The diameter of the calibre of the tube, measured from the inner edge of one side to the inner edge of the other, is three-eighths of an inch; while the depth, measured from the anterior inner edge to the posterior, is one-sixteenth of an inch. This is applied to the roof of the mouth, in the median line, in such a manner that the anterior end is lodged just behind the teeth; while the posterior opens into the mouth, looking upward and backward toward the fauces. In this position it is maintained by a delicate piece of wire or thin slip of india rubber fastened to one end of the tube, the other passing between the incisor teeth of the upper

jaw. This tube is intended to overcome the difficulty in the pronunciation of the linguo-palatal letters, which are formed by the application of the tongue to the palate. This it accomplishes by preserving a continuous current of air, thereby preventing spasm, allowing the letter in fault to be properly elicited, and thus restoring the self-confidence of the sufferer.

"2. For the explosive consonants, the labials, dento-labials, etc., the contrivance consists of a hollow, bi-convex disk, from one end of which projects a silver tube, which, passing out between the lips, keeps up the communication between the atmosphere and the oral cavity. The current of air from the glottis enters by means of a small hole at one side of the disk, and escapes through the silver tube. Finding the saliva was apt to accumulate in the disk, and thus obstruct the entrance and exit of air, the inventor has recently substituted for this lateral opening a small tube, passing from the upper edge of the disk, and bent at an acute angle upon itself.

"3. For the accurate elimination of the guttural sounds, Mr. Bates has contrived a belt, made of patent or glazed leather, or any other strong material, and lined with morocco. This belt is concealed in an ordinary stock or cravat, and in this manner secured around the neck. In the middle, and on the anterior surface of this belt, is fitted a metallic plate, through which passes a regulating screw. On the inner side of the belt, and just opposite the plate, is a metallic spring, covered with kid or any other soft material, and firmly sewed by both ends to the strap. When this apparatus is adjusted about the neck, the regulating screw, resting upon the spring, causes the latter to be forced inward, so as to press more or less strongly upon the thyroid cartilage, thus relaxing the rima-glottidis by approximating the thyroid to the arytenoid cartilages. In this manner, the exit of air is provided for, and the spasmodic action of the muscles that close the glottis is overcome. The pressure

upon the larynx can be increased or diminished, as may be required.

"From the above description it will be seen that the efficiency of these instruments is entirely dependent upon the unobstructed channel which they preserve for the egress of the vibrating column of breath from the larynx, through the mouth into the open air. Muscular spasm is necessarily removed, and the self-confidence of the stammerer restored — undoubtedly the great desideratum in this affection. When the patient is fully convinced that he can really enunciate the opposing letters as distinctly as his friends, he rapidly overcomes the disease, by the judicious and effective exertions which renewed confidence begets.

"An advantage of some importance possessed by this apparatus is, that it can be worn without attracting notice, two of the pieces — the tube for the palatal and the belt for the guttural sounds — being entirely concealed; while the tube which projects externally from the silver disk may be disguised by slipping over it the barrel of a quill, cut like a tooth-pick. Moreover, each of the pieces can be most easily and expeditiously applied, as occasion may require. . . .

"By order of the Committee,

"WILLIAM HAMILTON, *Actuary*." <sup>1</sup>

This collection of machinery was sent to the stammerer on payment of fifteen dollars. If he retained it in his possession for a longer period than four months, he was required to pay another fifteen dollars; but he then became the lawful owner of the equipment.

Instruments similar to "Bates' Appliances" may still at times be encountered.

<sup>1</sup> Quoted from *The Voice*, Vol. VI, p. 141.

Itard's tongue-fork, Colombat's "refoule langue," and Wutzer's "glosso-mochlion" are fortunately extinct. But even now an occasional troglodyte will recommend a tongue-raising apparatus reminiscent of these contrivances.

Till a few years ago a German "speech specialist" was selling "tongue-nerve powders" — at sixteen for six marks. These powders were employed to "revitalize and strengthen the weakened tongue-nerves." Medicaments for curing stammering now belong, however, almost exclusively to the past.

Galvanic, faradic, and static electrical treatments were once popular in the therapy of stammering. They have now been almost universally discarded.

Various gymnastic exercises are used in many stammering-schools. Ling's Swedish exercises are particularly popular.<sup>1</sup>

Little need be said concerning mechanical and physical aids in the treatment of stammering. Such devices can be of benefit only while they inhibit fear,

<sup>1</sup> Here is one argument for gymnastics :

"The usual cause, however, is an easily excited brain, and stammerers are frequently persons of very acute sensibility and intelligence. But in the case of such sensitive brains, thought is apt to radiate so quickly as to defeat the capacity of the nerves to convey it. Hence frequently arises the habit of stammering.

"Taking this hypothesis as my starting point, I argued that by developing other parts of the body, and thus diverting the brain-impulses to other areas of the system, as well as by toning up the nerves and circulation generally, by means of *scientific* physical



etc., which will not be for long. Electrical treatments and gymnastic exercises are certainly not directed at the cause of abnormal utterance.

At this point it may be opportune to say a word concerning surgical operations, — which are, of course, intended to remove mechanical obstructions to speech. The operating craze began in 1841, but, like many of its victims, it was shortly blessed with death. Unfortunately a few of its illegitimate offspring survive. The parent operation consisted in slicing a transverse wedge from the base of the tongue. The edges of the gap were then brought and sewed together; and the tongue was in the much-wished-for “high position.” The filial operations consist in removing adenoids, tonsils, elongated uvulas, and other accessible material. An English teacher of stammerers (apparently with no medical knowledge) finds seventy-nine stammerers in a hundred afflicted with various “obstructions.” These obstructions, it is true, are not represented as causes of stammering, culture, I should produce a more harmonious balance of brain and body, to the lasting benefit of the sufferer.”

*Oh, how scientific!*

And here we have convincing proof that physical exercises are injurious:

“Besides the other remedies, she practised gymnastic exercises, and consequently lost her voice altogether, because gymnastics increased the peripheral strength.”

And so it goes.

but as aggravants to be excised prior to elocutionary training.

No intelligent person would contend, of course, that genuine obstructions to respiration should not be removed. But such obstructions seldom stand in causal relation to stammering; and when 79 per cent of a teacher's prospective pupils require surgical treatment, one would at least conjecture that the standards applied are in need of adjustment.

## CHAPTER VII

### PSYCHOLOGICAL METHODS

IN reviewing psychological methods of treating stammering, we shall consider first the various minor and miscellaneous expedients that occupy accessorial positions in the conventional "elocutionary" systems. Afterward, we shall examine the more conspicuous measures that are frequently employed as systems in themselves.

A century-old accessory that still remains popular is the period of silence at the beginning of treatment. The most familiar argument in support of the silence-period is that it permits a disintegration of the old "habit" while a new one is being formed.<sup>1</sup> Other arguments are that silence affords rest to "overwrought nerves," that it has a beneficial psychological effect, and so on. — It is somewhat difficult to say whether or not the silence-period is really salutary; for when this period terminates, the pupil usually resorts to unnatural speech — sing-singing,

<sup>1</sup> "Silence" usually means refraining from conversation. The pupils commonly practise exercises during this period.



time-beating, drawling, etc. He then speaks more fluently; but by sing-songing, etc., he might have spoken just as fluently from the first. The initial silence-period is usually considered by teachers and pupils alike to be highly beneficial; but their conclusions cannot be regarded as apodictic, since they take no cognizance of many of the factors involved.

Subsequent periods of silence are often prescribed by teachers of stammerers when pupils are meeting with unusual difficulty.

1      A psychological exercise that is now and then recommended is the practice of internal speech. The student confines his thought as far as possible to verbal imagery, thinking his words in a direct and orderly manner. This measure might be beneficial to the stammerer that thinks generally in visual images, or that finds himself subject to multiple thought during speech. On the other hand, it would be of no benefit to the stammerer that invariably thinks his words in orderly consecution.

The following "golden rule" is often commended to the stammerer: "Never begin a sentence till you know how it is to conclude." This expedient of thinking out the sentence has already been discussed.<sup>1</sup> It may be efficacious when no lalophobia exists (with children, for instance); but in other cases it may enhance the stammerer's fear. Here the proof of

<sup>1</sup> Vol. I, p. 342.

the pudding will be the presence or absence of indigestion.

The contrary procedure consists in speaking one's words as they rise in the mind, and uttering them rapidly to prevent the intrusion of "foreign ideas."<sup>1</sup> In reading for practice, one covers the succeeding words in order that they may not divert attention. All of which seems like a roundabout and undesirable method of obtaining a desirable end.

The stammerer is sometimes advised to visualize his words in print or script. This expedient has already been discussed.<sup>2</sup>

The antipodal procedure consists in "darkening the mental eye" for the purpose of excluding "letters." It is difficult to criticize the procedure, for no specific instructions are given for accomplishing the feat, and each stammerer is left to discover his own means of affixing an eye-flap to his organ of psychic vision.

Associated with the process of "darkening the mental eye" is that of acquiring "phlegmatics."

"All of your force and energy, exerted hitherto in the wrong direction, must be devoted to acquiring that which is essential, viz. : — phlegmatics ["exaggerated calmness"]. . . . This we bring about by placing ourselves in the state of a tired, sluggish, or feeble individual."

<sup>1</sup> This expedient seems to have been introduced by Moses Mendelssohn.

<sup>2</sup> Vol. I, pp. 350 ff. Concerning visualization of oral movements, see Vol. I, pp. 362 ff., and Vol. II, pp. 94 ff.

This is Dr. Sandow's expedient, already discussed.

6 The stammerer is often advised to assume a "positive" attitude and to speak in a loud, confident voice. The suggestion is in line with James's theory that one may ultimately feel an emotion by continually affecting it. But perhaps a *quiet* and confident voice would be no less efficacious than vociferous utterance.

Most "speech specialists" make much of imbuing the stammerer with enthusiasm. "In the lexicon of youth, which fate reserves for a bright manhood, there is no such word as 'fail.'" But in this hulla-baloo one is merely taking advantage of a printer's error. Enthusiasm in the student is desirable enough, but it is a mighty poor substitute for competency in the instructor.

7 Most teachers of stammerers approve the simple life. "Early to bed and early to rise," "Coffee is a poison and tobacco a narcotic," and so on. But in these matters the stammerer will, of course, be guided by his temperament and individual experience. — The advice to avoid extreme fatigue is pretty generally pertinent, for when mentally or physically tired most stammerers experience an exacerbation of the impediment.

Then there are the inevitable *bizarrerries* among the accessories employed in treating stammering. An American teacher eulogizes a specific mental atti-

tude for repelling or diverting (we are not sure which) "impingements from a lower plane."

Another teacher recommends abstinence from animal food, combined with soul-training and mental gymnastics. The mental gymnastics suggested are politeness, fasting, and prayer.

A third teacher seems to be recommending something in the following paragraphs :

"There is a supreme moment, the leading up to which is as quick as thought. It is the catching of this supreme moment that constitutes control. The moment thought becomes complete feeling is that in which complete thought may be expressed. This moment is that in which inspiration being complete upon the plane of the thought, the expiration is led off upon the same plane by the Intent. There is no miscarriage. However apprehensive the speaker may have been up to this point, the moment he feels this unity, he is henceforth strong.

"The stutterer should seek for, and duly recognize, this subtle something that speaks of the task performed, before the thought is attempted in expression. At a distance from him, out in the outer atmosphere, he will be sensible of having projected a force that not only will act as a fitting medium for unclogged utterance, but which will insure him against attacks of fear, or accidents from without, that might otherwise impede the transmission of his thought, by turning his mind from an established purpose."

So much, then, for the psychological accessories.

We shall now examine the major psychological measures employed in the treatment of stammering.

The first expedient that we have to consider is auto-suggestion, which forms the basis of several "therapeutic" systems. We give as typical, the instructions of an English stammering-school that employs auto-suggestion and elocutionary expedients as coördinate measures :

"Without a liberal measure of Auto Suggestion all my advice will be largely thrown away. Auto Suggestion is your own voice speaking to your own inner self. You must realize how important it is that you should *give* yourself the right auto-suggestions; *think* of them and act on them.

"The effect of Auto Suggestion is based on the fact that any achievement is brought about in the first place by an idea formulated in the mind, and the more firmly this takes root the more rapid and permanent will be the accomplishment.

"When applying auto-suggestion you must not forget that it is vital to bring into play the whole force of your will. If it is to act as an inspiration and develop its full power it must be done with intentness and fixity of purpose. And you must be convinced of the truth of the suggestion proceeding from your will, it is bound to work with direct force on your imagination.

"A suggestion in order to grow wants time, and any impetuosity is liable to drive it away again. It is therefore fundamentally wrong to suggest too much or too often. A few suggestions well and correctly used keep on working on their own account. That is why it is always advisable to divert your thoughts immediately after the suggestions have been made. The wording of the suggestions is immaterial, the sense being the essential thing. However, it is imperative to become entirely absorbed in the sense of the suggestions, *thinking* or *speaking* slowly, calmly, and with firmness.—

"Always use the present tense.

"The daily practice should be as follows :

"Auto Suggestions given in the morning immediately after waking up, and at night immediately before falling to sleep.

"Once in your thoughts. —

"I am indifferent in every way and do not lose my self-control.

"My speaking is quite normal. I have no difficulties whatever. When I have to speak I *go down* [lower the pitch] and always form very easy volume of sound.

"*Twice in whispering voice.*

"I am always calm and indifferent. My speaking is quite fluent. I always form easy volume of descending sound, avoiding any pressure.

"*Four times aloud.* — The Same as above.

"It is further necessary to sketch out certain situations in which you previously experienced special difficulties, with the view of your speaking now with entire freedom.

"After having sketched out the situations and your actions minutely, you have to give the final suggestions either in a whispering voice or aloud. The wording in which you clothe the suggestions has to be adapted for the special purpose. However, it is vital to use in addition such suggestions as the following. It is nonsense to think I have any difficulty in speaking (in a shop or at the telephone). On the contrary it gives me pleasure to go into shops, etc., and to *speak with easy volume of descending sound.*

"It is of *great importance* at the same time *never* to sketch out more than one or at most two such situations of life. Further you must not practise one situation to-day and another to-morrow, but you must concentrate your mind for some time (*two or more weeks*) on the same situation in order to impress it so intensely that the suggestion can be turned into action.

"After you have finished the sketch which should not take

## 232 SYSTEMS OF TREATING STAMMERING

more than five minutes, your thoughts should be *diverted* immediately.

"The desired result, provided that you practise intensely, is bound to come, as it is based on the natural working of your *subconscious* mind (mind behind the principal mind)."

Much of the procedure here advocated appeals to one as being fetishistic. "Once in your thoughts . . . Twice in whispering voice . . . Four times aloud." — Well, why? If auto-suggestion ever proves effective, it is undoubtedly due to the fact that during suggestion, sthenic emotions are associated with the ideas of the action or situation depicted. The emotions may then recur when the action or situation comes to be realized. The whispering formula is certainly foreign to the matter. — The subconscious mind here invoked is, of course, supposititious.

For persons with certain types of minds this auto-suggestive procedure might prove beneficial. However, the writer has witnessed its application in a number of cases, and in these it has yielded "negative results."

Counter auto-suggestion (suggestions of "I *can* and *will*," etc.) are often recommended by "speech specialists" for combating immediate difficulties. This subject has been discussed in the preceding volume (pp. 339-340).

2 Hypnotism is frequently employed in treating stammering. The patient is brought into a drowsy (or

occasionally a somnambule) condition by suggestions of sleep, by passes, by being required to fixate an object, etc. He is then given suggestions of his confidence and ability to speak. If somnambule, he may be required to converse with, or read to, the person conducting the treatment.

A German teacher that places great reliance upon hypnotism writes thus of its efficacy:

"The treatment of stammering by means of hypnotic suggestion commends itself as an exclusively psychological method; and as such it offers essential advantages. First, sleep exerts so beneficial an influence on the nervous and excitable nature of the stammerer, and so counteracts his characteristic disquietude, haste, and fear, that speech-disturbances almost invariably vanish during hypnosis. And further, the influences employed to combat the thought of stammering are usually accepted without criticism in the deeper stages of sleep; and the auto-suggestive nature of the difficulty — the stammerer's belief in his inability to talk — is removed more rapidly than would be the case with any other form of treatment. We have already noted what labor and pains the so-called 'environmental stammerer' <sup>1</sup> occasions the teacher when other systems are employed. With such patients, hypnotic suggestion affords the only effective treatment; and, moreover, the work is greatly simplified for both pupil and teacher. The latter need no longer follow each step of the pupil, for the factors and situations that the pupil fears can be attacked by suggestion." <sup>2</sup>

<sup>1</sup> "*Situations-stotterer*" — one that speaks fluently in the institution and with friends, but stammers in certain difficult situations.

<sup>2</sup> From the prospectus of a German stammering-school.



Numerous cures are reported by persons that have employed the hypnotic method. Wetterstrand, for instance, reports fifteen cures in forty-five cases.<sup>1</sup> But, of these fifteen patients, thirteen were children from five to twelve years of age; so, after all, the performance was not remarkable — and Wetterstrand admits ignorance as to whether or not many of his cures were permanent.

On the whole, the treatment of stammering by hypnotic suggestion has not been successful. Most writers on general hypnotism report a fair percentage of cures — but this with a small number of cases. The hypnotist, however, usually knows nothing about stammering; hence his criterion of cure may be faulty, and his figures consequently unreliable.<sup>2</sup>

It is interesting to note what Gutzmann has to say concerning the hypnotic treatment of stammering.<sup>3</sup>

"The whole hypnotic treatment of stammering has been a fiasco. Forel, a champion of hypnotic therapy, has himself plainly avowed the fact; and success has been achieved only when hypnotic treatment has been employed in conjunction with a system of gymnastic and physiological training. No reasonable physician doubts that a stammerer may be brought into a

<sup>1</sup> Wetterstrand, "Hypnotism and its Application to Practical Medicine," pp. 36 ff.

<sup>2</sup> The writer has in mind a physician that subjected a patient to the test of *repeating after him* some of his difficult words. He was delighted to find that the patient spoke with fluency; and was practically ready to pronounce the case a cure.

<sup>3</sup> Hermann Gutzmann, "Sprachheilkunde," 2d ed., p. 394.

tranquil mood by hypnotic suggestion, and that the stammerer will speak relatively well under these conditions; but he may with good reason question the fact that this tranquil mood will continue. Thus we see hypnotic treatment — treatment intended merely to remove the stammerer's fear — prove abortive though continued for years."

Hypnotic treatment, even though it were potentially efficacious, would almost surely fail because of the extremely general nature of the suggestions. Yet if both patient and physician possessed an intelligent comprehension of the malady, and the patient could himself diagnose the case; then it seems not at all improbable that *specific* suggestions might be given that would prove effective.

In a few European stammering-schools, suggestions are given to the pupil "in the waking state." This form of treatment, its votaries are ardent to emphasize, is not hypnotism. But hypnosis itself does not necessarily involve unconsciousness or sleep. The commendation of "*Wachsuggestionen*" is commonly a quibble intended to circumvent popular ignorance and prejudice regarding hypnotism.

Psychoanalysis has recently been employed in the treatment of stammering by persons holding the view that the disturbance is a fear-neurosis or an "obsession" (*Angstneurose*, *Angsthysterie*, *Wahnvorstellung*, etc.). The purpose of the analysis is to ascertain the cause of the obsessing fear, which

is usually taken to be an emotion or desire that has at some time been voluntarily "repressed" (*verdrängt*) from the conscious into the (hypothetical) subconscious mind. It is somewhat difficult to give a concise summary of the psychoanalytic theories, for these theories are vaporous even in the minds of their propounders, and writers that have treated the subject have given us little more than immethodical discussions with arguments based largely on analogy. We will, however, attempt a résumé, quoting psychoanalysts where feasible in order to avoid any possible misinterpretation.

First, the distinction between psychoanalysis and hypnotic suggestion:

"I notice that this method is often mistaken for the hypnotic suggestive treatment. I notice this by the fact that quite frequently colleagues whose confidant I am not by any means, send patients to me, refractory patients of course, with the request that I should hypnotize them. Now, for eight years I have not practised hypnotism (individual cases excluded) as a therapeutic aim, and hence I used to return the patients with the advice that he who relies on hypnosis should do it himself. In truth, the greatest possible contrast exists between the suggestive and the analytic technique, that contrast which the great Leonardo da Vinci has expressed for the arts in the formulæ *per via di porre* and *per via di levare*. Said Leonardo, 'The art of painting works *per via di porre*, that is to say, places little heaps of paint where they have not been before on the uncolored canvas; sculpturing, on the other hand, goes *per via di levare*, that is to say, it takes away from the stone as

much as covers the surface of the statue therein contained.' Quite similarly, gentlemen, the suggestive technique acts *per via di porre*, it does not concern itself about the origin, force, and significance of the morbid symptoms, but puts on something, to wit, the suggestion which it expects will be strong enough to prevent the pathogenic idea from expression. On the other hand the analytic therapy does not wish to put on anything, or introduce anything new, but to take away, and extract, and for this purpose it concerns itself with the genesis of the morbid symptoms, and the psychic connection of the pathogenic idea, the removal of which is its aim."<sup>1</sup>

Concerning the genesis of the morbid symptoms, Freud says:

"Almost all the symptoms originated . . . as remnants, as precipitates, if you like, of affectively-toned experiences, which for that reason we later called 'psychic traumata.' The nature of the symptoms became clear through their relation to the scene which caused them. They were, to use the technical term, 'determined' (*determiniert*) by the scene whose memory traces they embodied, and so could no longer be described as arbitrary or enigmatical functions of the neurosis. . . ."<sup>2</sup>

"We are forced to the conclusion that the patient fell ill because the emotion developed in the pathogenic situation was prevented from escaping normally, and the essence of the sickness lies in the fact that these 'imprisoned' (*dingeklemmt*)

<sup>1</sup>"Selected Papers on Hysteria and other Psychoneuroses," Freud (translated by Brill), pp. 177-178.

<sup>2</sup>Freud in "Lectures and Addresses delivered before the Departments of Psychology and Pedagogy in Celebration of the Twentieth Anniversary of the Opening of Clark University," p. 5.

## 238 SYSTEMS OF TREATING STAMMERING

emotions undergo a series of abnormal changes. In part they are preserved as a lasting charge and as a source of constant disturbance in psychical life; in part they undergo a change into unusual bodily innervations and inhibitions, which present themselves as the physical symptoms of the case. We have coined the name 'hysterical conversion' for the latter process."<sup>1</sup>

When there is little or no "conversion," the symptoms are directly related to the cause :

"To take the most commonplace example: a painful emotion occurs while one is eating, but is repressed; this results in nausea and vomiting, which may then continue for months as an hysterical disturbance. A girl is watching with painful anxiety by the sick-bed. She falls into a dreamy and absent-minded state, and in this condition experiences a terrifying hallucination, while her right arm, which is hanging over the back of the chair, 'falls asleep.' There results a paralysis of this arm, with contracture and anæsthesia. She wishes to pray, but finds no words. Finally she succeeds in uttering a child's prayer in English. When later there develops a severe and highly complicated hysteria, she speaks, writes, and understands only English, while for a year and a half her mother-tongue remains unintelligible to her. — A mother is watching by a sick child that has at last gone to sleep. The mother concentrates the entire force of her will upon the task of remaining quiet, so that the child may not be disturbed. But, as the direct result of this effort, she produces a clicking sound with the tongue ('hysterical counter-will'). This happens again on another occasion when she wishes to remain perfectly still. This leads to a tic, manifesting itself through several years as

<sup>1</sup> Freud, *loc. cit.*, p. 8.

a clicking of the tongue with every excitement. — A highly intelligent man is assisting the surgeons in stretching his brother's ankylosed hip. The patient is anæsthetized, and as the joint yields with a cracking sound, the man feels severe pain in his own hip, which symptom then continues for nearly a year; etc."<sup>1</sup>

But usually there is complete "hysterical conversion," and the morbid symptoms bear no overt relation to the emotion or thought "repressed." (Hence, of course, the need for *psychoanalysis*.)

"If the original emotion has discharged itself not in the normal, but in an 'abnormal reflex,' then it is the latter reflex that is induced by recollection of the incident. The excitation produced by the affectively-colored recollection is 'converted' into a corporeal phenomenon.

"If this abnormal reflex has become habitual through frequent repetition; then, it seems, the efficacy of the exciting recollection may be exhausted to the point where the emotion is reduced to a minimum or altogether disappears. The 'hysterical conversion' is then complete. The mental representation (*Vorstellung*), having lost its psychic effect, is now overlooked by the individual; or its appearance in memory is at once forgotten, as is the case with images that are not affectively colored."<sup>2</sup>

As examples of "abnormal reflexes" Breuer cites one's pacing the floor instead of groaning when he is suffering from toothache; and one's grasping the arms or back of a dentist's chair instead of screaming

<sup>1</sup> Breuer and Freud, "Studien über Hysterie," pp. 2-3.

<sup>2</sup> Breuer, in Breuer and Freud's "Studien über Hysterie," p. 180.

and repelling the dentist. As an example of "conversion" he cites the fact that the recollection of an unavenged wrong may give rise to invective language.

These "hysterical symptoms" are "determined" by the nature of the "psychic traumata." And the "psychic trauma," according to Freud, is a "repressed" wish :

"What were those forces, and what were the conditions of this repression, in which we were now able to recognize the pathogenic mechanism of hysteria? A comparative study of the pathogenic situations, which the cathartic [or psycho-analytic] treatment has made possible, allows us to answer this question. In all those experiences, it had happened that a wish had been aroused, which was in sharp opposition to the other desires of the individual, and was not capable of being reconciled with the ethical, æsthetic and personal pretensions of the patient's personality. There had been a short conflict, and the end of this inner struggle was the repression of the idea which presented itself to consciousness as the bearer of this irreconcilable wish. This was, then, repressed from consciousness and forgotten. The incompatibility of the idea in question with the 'ego' of the patient was the motive of the repression, the ethical and other pretensions of the individual were the repressing forces. The presence of the incompatible wish, or the duration of the conflict, had given rise to a high degree of mental pain ; this pain was avoided by the repression. This latter process is evidently in such a case a device for the protection of the personality."<sup>1</sup>

<sup>1</sup> Freud, "Lectures and Addresses on Psychology and Pedagogy at Clark University," p. 13.

The repressed wish, according to Freud, is invariably of a sexual nature :<sup>1</sup>

"Psychoanalytic investigations trace back the symptoms of disease with really surprising regularity to impressions from the sexual life, show us that the pathogenic wishes are of the nature of erotic impulse-components (*Triebkomponente*), and necessitate the assumption that to disturbances of the erotic sphere must be ascribed the greatest significance among the etiological factors of the disease. This holds of both sexes. . . .

"The conduct of the patients does not make it any easier to convince one's self of the correctness of the view which I have expressed. Instead of willingly giving us information concerning their sexual life, they try to conceal it by every means in their power. Men generally are not candid in sexual matters. They do not show their sexuality freely, but they wear a thick overcoat — a fabric of lies — to conceal it, as though it were bad weather in the world of sex. And they are not wrong; sun and wind are not favorable in our civilized society to any demonstration of sex life. In truth no one can freely disclose his erotic life to his neighbor. But when your patients see that in your treatment they may disregard the conventional restraints, they lay aside this veil of lies, and then only are you in a position to formulate a judgment on the question in dispute. Unfortunately physicians are not favored above the rest of the children of men in their personal relationship to the questions of the sex life. Many of them are under the ban of that mixture of prudery and lasciviousness which determines the behavior of most *Kulturmenschen* in affairs of sex. . . .

"It is true that in another series of cases psychoanalysis at first traces the symptoms back not to the sexual, but to banal traumatic experiences. But the distinction loses its significance

<sup>1</sup> *Loc. cit.*, pp. 26 f.



through other circumstances. The work of analysis which is necessary for the thorough explanation and complete cure of a case of sickness does not stop in any case with the experience of the time of onset of the disease, but in every case it goes back to the adolescence and the early childhood of the patient. Here only do we hit upon the impressions and circumstances which determine the later sickness. Only the childhood experiences can give the explanation for the sensitivity to later traumata and only when these memory traces, which almost always are forgotten, are discovered and made conscious, is the power developed to banish the symptoms. We arrive here at the same conclusion as in the investigation of dreams — that it is the incompatible, repressed wishes of childhood which lend their power to the creation of symptoms. Without these the reactions upon later traumata discharge normally. But we must consider these mighty wishes of childhood very generally as sexual in nature."

As Freud himself expresses the matter, "the theory culminates in the sentence: In a normal *vita sexualis* no neurosis is possible."<sup>1</sup>

According to the theory, the repressed wish expresses itself in surrogates (by a process of "conversion"); and thus leads to the anomalous symptoms observed:

"We come to the conclusion, from working with hysterical patients and other neurotics, that they have not fully succeeded in repressing the idea to which the incompatible wish is attached. They have, indeed, driven it out of consciousness and

<sup>1</sup> "Selected Papers on Hysteria and other Psychoneuroses," p. 188.

out of memory, and apparently saved themselves a great amount of psychic pain, *but in the unconscious the suppressed wish still exists*, only waiting for its chance to become active, and finally succeeds in sending into consciousness, instead of the repressed idea, a disguised and unrecognizable surrogate-creation (*Ersatzungsbild*), to which the same painful sensations associate themselves that the patient thought he was rid of through his repression. This surrogate of the repressed idea — the symptom — is secure against further attacks from the defences of the ego, and instead of a short conflict there originates now a permanent suffering.”<sup>1</sup>

As to the relation between the symptoms and the “psychic trauma,” Freud says:<sup>2</sup>

“We can observe in the symptom, besides the tokens of its disguise, a remnant of traceable similarity with the originally repressed idea; the way in which the surrogate is built up can be discovered during the psychoanalytic treatment of the patient, and for his cure the symptom must be traced back over the same route to the repressed idea.”

In endeavoring to trace the relationship between the symptoms and the “psychic trauma” the psychoanalyst may resort to several expedients—hypnotism, an analysis of the patient’s dreams, observance of his incoördinations (*Fehlhandlungen*), and an exploration of his “subconscious mind” (*das Unbewusste*) by the methods of controlled and free association.

<sup>1</sup> Freud, “Lectures and Addresses on Psychology and Pedagogy at Clark University,” pp. 15–16.

<sup>2</sup> *Loc. cit.*, p. 16.

With the hypnotic method, the physician brings the patient into a state of hypnosis and obtains from him an account of his troubles; he then endeavors to trace back the process of "conversion." This method was the one first employed in psychoanalysis, but it has now been pretty generally discarded.

In analyzing the patient's dreams, the physician interprets them as symbolic fulfilments of repressed wishes :

"If you will undertake to consider the dreams of young children from the age of a year and a half on, you will find them quite simple and easy to interpret. The young child always dreams of the fulfilment of wishes which were aroused in him the day before and were not satisfied. You need no art of interpretation to discover this simple solution, you only need to inquire into the experiences of the child on the day before (the 'dream day'). Now it would certainly be a most satisfactory solution of the dream-riddle, if the dreams of adults too, were the same as those of children, fulfilments of wishes which had been aroused in them during the dream day. This is actually the fact; the difficulties which stand in the way of this solution can be removed step by step by a thorough analysis of the dream.

"There is, first of all, the most weighty objection, that the dreams of adults generally have an incomprehensible content, which shows wish-fulfilment least of anything. The answer is this: these dreams have undergone a process of disguise, the psychic content which underlies them was originally meant for quite different verbal expression. You must differentiate between the *manifest dream-content*, which we remember in the morning only confusedly, and with difficulty clothe in words

which seem arbitrary, and the latent *dream-thoughts*, whose presence in the unconscious we must assume. This distortion of the dream (*Traumentstellung*) is the same process which has been revealed to you in the investigations of the creations (*symptoms*) of hysterical subjects; it points to the fact that the same opposition of psychic forces has its share in the creation of dreams as in the creation of symptoms.

"The manifest dream-content is the disguised surrogate for the unconscious dream thoughts, and this disguising is the work of the defensive forces of the ego, of the resistances. These prevent the repressed wishes from entering consciousness during the waking life, and even in the relaxation of sleep they are still strong enough to force them to hide themselves by a sort of masquerading. The dreamer, then, knows just as little the sense of his dream as the hysterical knows the relation and significance of his symptoms. That there are latent dream-thoughts and that between them and the manifest dream-content there exists the relation just described — of this you may convince yourselves by the analysis of dreams, a procedure the technique of which is exactly that of psychoanalysis. You must abstract entirely from the apparent connection of the elements in the manifest dream and seek for the irruptive ideas which arise through free association, according to the psychoanalytic laws, from each separate dream element. From this material the latent thoughts may be discovered, exactly as one divines the concealed complexes of the patient from the fancies connected with his symptoms and memories. From the latent dream thoughts which you will find in this way, you will see at once how thoroughly justified one is in interpreting the dreams of adults by the same rubrics as those of children. What is now substituted for the manifest dream-content is the real sense of the dream, is always clearly comprehensible, associated with the impressions of the day before, and appears as the fulfilling

of an unsatisfied wish. The manifest dream, which we remember after waking, may then be described as a *disguised* fulfilment<sup>1</sup> of *repressed* wishes.”<sup>2</sup>

In observing the patient's “Fehlhandlungen” — his bungling acts, and his errors in reading, writing, speaking, etc. — the psychoanalyst again looks for hidden meanings :

“These little things, the bungling of acts, like the symptomatic and chance acts (*Symptom- und Zufallshandlungen*) are not so entirely without meaning as is generally supposed by a sort of tacit agreement. They have a meaning, generally easy and sure to interpret from the situation in which they occur, and it can be demonstrated that they either express impulses and purposes which are repressed, hidden if possible from the con-

<sup>1</sup>To the present writer it would seem a thousand times more reasonable to ascribe dreams to the idio-activity of brain-cells that have recently subserved powerful impressions, or ideas accompanied by emotion. If the dream were to start with such ideas as a nucleus, it would, if continued, lead by association (a process of “impartial redintegration”) to things more irrelevant. With this state of affairs, the nucleus would, of course, occasionally be a wish.

It is interesting to note the following paragraph by Breuer :

“In the days immediately following a railway accident, for instance, one re-lives the scene in his waking hours and *during sleep*, and experiences again the painful shock and emotion. This continues till at last, after the period of ‘psychic maturation’ (Charcot) or incubation, conversion to a somatic phenomenon is effected.” (“Studien über Hysterie,” p. 186.)

But what repressed wish is symbolized when one re-lives such an event in his dreams?

<sup>2</sup> Freud, “Lectures and Addresses on Psychology and Pedagogy at Clark University,” pp. 21-22.

sciousness of the individual, or that they spring from exactly the same sort of repressed wishes and complexes which we have learned to know already as the creators of symptoms and dreams.”<sup>1</sup>

In employing “controlled association,” the psychoanalyst reads the patient a number of “stimulus-words.” For each stimulus-word the patient gives the “reaction-word” (or words) first aroused in his mind by association. Example:

STIMULUS-WORD	REACTION-WORD
“head	foot
green	blouse
water	clear
to sing	children
dead	do not like
long	short
ship	forth
to pay	bills
window	room
friendly	children
table	chair
to ask	all kinds
cold	warm”

From the relations between the stimulus- and reaction-words the psychoanalyst endeavors to fathom the patient’s “repressed wishes” and sift the refuse of his “subconscious mind.”

For “free association” the procedure is as follows:

<sup>1</sup> Freud, *loc. cit.*, p. 24.

"The patient lies on his back on a lounge, the physician sitting behind the patient's head at the head of the lounge. In this way the patient remains free from all external influences and impressions. The object is to avoid all muscular exertion and distraction, thus allowing thorough concentration of attention on the patient's own psychic activities. The patient is then asked to give a detailed account of his troubles, after having been told before to repeat everything that occurs to his mind, even such thoughts as may cause him embarrassment or mortification. On listening to such a history one invariably notices many memory gaps, both in reference to time and causal relations. These the patient is urged to fill in by concentration of attention on the subject in question, and by repeating all the unintentional thoughts originating in this connection. This is the so-called method of 'free association!' The patient is required to relate all his thoughts in the order of their sequence even if they seem irrelevant to him. He must do away with all critique and remain perfectly passive. It is in this way that we fathom the original meaning of the symptom. But as the thoughts which originate in this manner are of a disagreeable and painful nature they are pushed back with the greatest resistance. This is further enhanced by the fact that the hysterical symptom is the symbolic expression of the realization of a repressed wish, and serves as a gratification for the patient. He strives very hard, unconsciously of course, to retain the symptom, as it is the only thing left to him from his former unattainable conscious wishes and strivings. The object of the psychoanalytic treatment is to overcome all these resistances, and to reconduct to the patient's consciousness the thoughts underlying the symptoms."<sup>1</sup>

<sup>1</sup> Brill, in the translator's preface to Freud's "Selected Papers on Hysteria and Other Psychoneuroses."

In analyzing the material obtained, the physician interprets its symbolic nature. The procedure is most readily exemplified in the psychoanalyst's interpretation of dreams. The dream of a Roumanian priest is thus recorded and interpreted by Stekel:<sup>1</sup>

"I tried to lease a residence from a certain Frau König. The residence was not to be had; but it was promised to me for a later date. This occurred in my native town, and not in the town where I live at present."

According to Stekel, engaging the residence refers to establishing a liaison. "Frau König" is a composite representation of four women, one of them the patient's mother. The reference to the patient's native town implies incestuous desires or propensities.

The following dream (of the wife of a "Wachmann") is recorded by Freud:<sup>2</sup>

"Then some one broke into the house, and she called apprehensively to a policeman. But the policeman went with two pilgrims into a church. Many steps led up to the church, and behind the building there was a hill, and above, a thick forest. The policeman had a brown beard, and he was wearing a helmet, a gorget, and a mantle. The two travelling students, who went peacefully with the policeman, were wearing sack-like aprons around the loins. In front of the church a path led up to the hill. On both sides this path was overgrown with

<sup>1</sup> "Nervöse Angstzustände und ihre Behandlung," p. 176.

<sup>2</sup> "Traumdeutung," 3d ed., p. 217.



grass and brambles; these grew thicker in the ascent, and on top of the hill formed a veritable forest."

According to Freud's interpretation, the various objects of the dream symbolize different parts of the male and female genitalia.

The psychoanalyst finds somewhat analogous renderings for practically all the material obtained.

The therapeutic process consists, then, in tracing the putative connection between the morbid symptoms and the "psychic trauma"; or, as the psychoanalyst sometimes puts it, in restoring the contents of the "subconscious mind" to consciousness. The therapy consists, further, in talking the matter over.<sup>1</sup> This supposedly affords the patient an opportunity for liberating the "imprisoned emotions" through normal channels, thus neutralizing the process of "conversion." Freud goes so far as to say that the treatment has no curative effect if the patient does not experience emotion when reproducing the "traumatic scene." The "pathogenic wish" is "directed to a higher goal," is rejected by the better faculties, or is brought into reconciliation with the patient's conscience. Then, if the patient is going to get well, he does so.

As a semi-scientific novelty, psychoanalysis has been employed in treating stammering. The results

<sup>1</sup> One of Breuer's patients has facetiously designated the treatment "the talking cure" or "chimney sweeping."

in most cases seem to have been "negative." Dr. Laubi admits that "psychoanalysis is no panacea for stammering,"<sup>1</sup> and he naïvely suggests that simpler means, such as change of diet or environment, are to be preferred. Probably these latter means would be just as effective.

The main objection to the psychoanalytic theories is that they are based on a superlatively superficial psychology. The existence and activity of the subconscious mind are taken as postulates;<sup>2</sup> and the

<sup>1</sup> *Medizinisch-pädagogische Monatsschrift für die gesamte Sprachheilkunde*, Vol. XXI, p. 118.

<sup>2</sup> The following performance of the subconscious mind is recorded by Freud ("Psychopathologie des Alltagslebens," 3d ed., p. 126):

"In a letter to a friend I informed him that I had finished correcting the 'Traumdeutung,' and would make no further changes 'even if the work should contain 2467 mistakes.' I tried at once to explain this particular number; and I embodied the analysis in a postscript to the letter. It will be well to cite the words that I wrote at the time as I caught myself in the act.

"Already a contribution to the 'Psychopathologie des Alltagslebens.' You find in this letter the number 2467 as a jocund and arbitrary estimate of the number of mistakes I am to find in the Dream-book. It means, of course, any large number, but this is the particular number that appeared. Now, there is nothing arbitrary and undetermined in the psychic life; and you will rightly suppose that the subconscious mind determined the number to which the conscious mind gave expression. Now, I had just been reading in the paper that a certain General E. M. had retired with the rank of Master of the Ordnance. You must know that this man interests me. When I was serving in the army as a medical élève, the colonel, as he was then, came to the ward. He said to the doctor, 'You must have me well in a week, for I have an important commission to fulfil for

symbolic business is strained to the point where psychoanalysis is unequivocally stultified.<sup>1</sup> By a free use of symbolism one could, with a little ingenuity, interpret the material of any case to suit the circum-

the Kaiser." I then resolved to follow his career, and now you see that to-day (1899) his military career is finished: he is a Master of the Ordnance, and has retired. I wished to calculate the number of years his promotion had covered. I suppose that I had seen him in the hospital in 1882; thus this period would be 17 years. I discussed this matter with my wife, and she remarked, "Then you should now be in retirement, too." I protested, "May the Lord forbid." After this conversation I seated myself at the table to write to you. But the former train of thought continued, and justly so—I had reckoned wrongly. I have a point to establish this in my memory. I celebrated my majority (my 24th birthday) under military arrest—as the result of having taken French leave. That was in 1880, or 19 years ago. There you have the number 24 in 2467. Now take my age, 43, add 24 to it, and you have the number 67!"

But one could, of course, explain any number from any set of circumstances if he allows the "subconscious mind" full liberty to perform calculations.—To-day is Tuesday, September 3, 1912. As my subconscious mind thinks "Tuesday, the third," it naturally observes that there are 7 letters in the word *Tuesday*. It multiplies 7 by 3, obtaining 21; it then adds 3 to 21 and gets the result 24. Continuing its investigations, my subconscious mind divides 3 into 24, and obtains 8. Squaring 8, it has 64; and adding 3, it derives 67. Simple enough!

But probably the most natural series of figures for one to re-integrate is 1-2-3-4 or 2-4-6-8. The most natural deviations from the latter series are 2-4-6-7 or 2-4-6-9. In the case in question we have the former number, and perhaps the subconscious mind was not involved after all. This seems the more likely since the existence of the subconscious mind has never been demonstrated.

<sup>1</sup> In order to interpret material the psychoanalyst is even prepared for the "bisexual significance of a symptom."

stances of any other. Moreover, with symbolism there is usually an infinity of possible interpretations, and no one but the psychoanalyst knows that his particular interpretation is correct. Furthermore, the wish and the repression are gratuitously adduced; and must be sustained when reason affirms the existence of neither.<sup>1</sup>

It is probable that the prevalence of "sexual traumata" has not been overestimated by the psychoanalysts, for *Homo sapiens* is but an animal with an assortment of somewhat undependable inhibitions. But psychoanalysts admit that "sexual traumata" are no more common among their patients than among persons free from neuroses; hence it is evident that even if their theories are correct, but half of the story has as yet been told.

Psychoanalysis, when it proves effectual, most probably works through suggestion. The objection to this theory is that some of the earliest patients were benefited in a "pre-suggestive" period. The objection to this objection is that hysterical and neurotic patients are often highly suggestible; and that when these early (female) patients submitted themselves to psychic treatment and willingly bared

<sup>1</sup> Why, for instance, should sexual symbolism be employed to interpret the respectable dreams of an intelligent and healthy-minded person that has normal sexual appetences of which he is totally unashamed and which he does not endeavor to "repress"?

## 254 SYSTEMS OF TREATING STAMMERING

their sexual "secrets," they must have had inordinate confidence in the physician, and undoubtedly *expected* to be benefited.

But such arguments are futile, for Freud finds in those that oppose his theories "the same impairment of intelligence produced by emotivity" that he is accustomed to finding in his patients.<sup>1</sup>

<sup>1</sup> "Lectures and Addresses on Psychology and Pedagogy at Clark University," p. 25.

## CHAPTER VIII

### "STAMMERING-SCHOOLS" AND "SPEECH SPECIALISTS"

"STAMMERING-SCHOOLS" are of two general kinds — the institutions and the correspondence schools.<sup>1</sup> The principals of institutions contend, of course, that treatment by correspondence is impossible; and correspondence teachers maintain in their turn that the advocates of personal treatment are disingenuous seekers after fees. It will be interesting (though perhaps scarcely profitable) to hear a few words on both sides of the argument:

"It is impossible to give written or printed instructions for the cure of stammering and stuttering, for every case has its peculiar symptom and a physiognomy of its own."

"Can stammering be cured at home? . . . We are inclined to believe that the reply has generally been in the negative by those schools whom resident pupils support by the payment of large fees and many weeks' board bill; but this is only natural and is but a weakness of human nature, and while we have every sympathy and good feeling for the gentlemen, in charge of the various schools of this nature, yet we cannot help but feel that they are biassed in their judgment."

"It would give me great pleasure and satisfaction if I could cure stammering by written instructions, but it cannot be done."

<sup>1</sup> Institutions are usually residential; but occasionally pupils merely visit the school during the instruction period.

## 256 SYSTEMS OF TREATING STAMMERING

So many contingencies are involved. Want of personal knowledge of a case, the temperament, the surroundings, the character, and of the many circumstances attendant thereon, offer insurmountable difficulties."

"Correspondence classes . . . have recently been formed. Results guaranteed."

"Many persons have written to me to inquire if I could give them printed or written instructions that would serve the same purpose as their presence at my school, to which question I have invariably answered, No."

"It was formerly a prevalent idea that the Cure of Stammering, without personal instruction, was an impossible undertaking. Theoretical writers gave it as their opinion, and practical instructors as the result of their experience. . . .

"It is now unnecessary to prove that the cure without personal instruction is theoretically possible, since the result is annually attained by The — System in numerous instances without difficulty, and any method that will not stand this test must be incomplete or erroneous."

"The method of cure cannot be imparted through correspondence; cannot be written down so as to be of any advantage to an uninstructed person."

"I cordially invite sufferers from this distressing condition to allow me to prescribe for them individual courses of my treatment, which can be successfully carried out at home, occupying but a few minutes of the day, and interfering with no business, domestic or social engagement."

It is scarcely necessary for us to discuss the merits (or demerits) of correspondence schools. These schools impart nothing that is not accessible in works

on elocution or stammering. The “correspondence pupil” merely pays a higher price for his information and gets it in instalments.

Nevertheless, the proprietors of the institutions are not always disinterested in their arguments against correspondence treatment. The instructor that writes of temperament, surroundings, character, and contingencies, finds that stammering is attempting to speak in an impossible way. He says there is only one way to speak ; and when you pay, he shows you.

Another “specialist” has overcome a good many dilemmas. In his advertising literature he says :

“There are no fewer than twenty or more entirely different and distinct types of stammering and stuttering, and there is no set plan or code of rules or exercises that will apply to all cases alike.”

“Each case,” says the same specialist, “must receive individual care and instruction.”<sup>1</sup>

Since writing all this, the “specialist” has devised a Home Course that costs forty dollars ; and on some points he has changed his opinion.

But all this discussion is rather idle. Correspondence schools are few and sporadic. They probably do very little good and very little harm ; and they need not be taken seriously.

Residential and similar institutions have existed

<sup>1</sup> His pupils, however, are taught *en masse*, and the one remedy for their twenty types of stammering is beating time.



## 258 SYSTEMS OF TREATING STAMMERING

for more than a hundred years; and it is with these stammering-schools that we are concerned (and it is these, of course, that we have had in mind in previous discussions).

The systems of these institutions, as already stated, consist of assemblages of expedients and exercises such as we have discussed. It would be impossible, of course, to describe each of these systems in detail; hence the writer gives the salient measures of a representative system for each of a number of different countries:

### *1. A Representative English System*

Inhale through the mouth.

When coldness is felt in the glottis, let the breath return.

Start speaking from the open position.

Wag the jaw freely.

Articulate lightly, but give final consonants compensatory emphasis.

Maintain continuity of sound.

Speak slowly.

Avoid effort — sigh the word out.

#### *Exercises:*

Moaning vowels.

Saying *bā-bē-bi-bō-bū*, etc.

Vowel-reading with gradual interpolation of consonants.

Reading in a whisper.

Counting.

Speaking before a mirror.

Relating anecdotes. Etc., etc.

2. *A Representative American System*

Inhale through the nose, breathing diaphragmatically.

Start from the closed position.

Give light articulation to closed consonants.

Open the mouth widely for continuous consonants.

Lower the pitch for vowels.

Beat time with the hand, and utter one syllable to a beat.

Speak slowly.

Eschew tea, coffee, and tobacco.

Be positive: "You've got to be *It*."

*Exercises:*<sup>1</sup>

Ling's Swedish gymnastic exercises.

Respiratory exercises, with and without dumb-bell drill.

Vocal exercises, with and without dumb-bell drill.

Rhythmic speaking while marching, performing dumb-bell exercises, etc.

Asking and answering questions; telling stories; talking from platform; etc. — always with rhythmic speech.

"Stranger-practice."

3. *A Representative Canadian System*

Inhale before speaking.

Drop the jaw; keep the muscles of the throat and jaw tense.

Prefix the vowel *ah* to the initial word in order to open the glottis.

Think sound.

Produce sound promptly.

Speak in a low pitch.

Maintain continuity of sound.

Articulate lightly; omit the more difficult consonants.

<sup>1</sup> A period of silence is observed at the beginning of treatment.

*Exercises:*

Practising the "fundamental vowel" *ah*.

Reading; relating anecdotes; etc., etc.

*4. A Representative French System*

Speak with assurance: never doubt your powers.

Take a deep initial inspiration, employing "costal-abdominal" breathing.

Forthwith let the breath return, and start speaking.

Avoid an abrupt beginning.

Prolong the initial syllable.

Articulate lightly.

Avoid all effort in speech.

Do not speak in a guttural, sepulchral, or smothered voice: make the vowels sonorous.

Exaggerate lip-movements and watch the labial positions.

Join the syllables together, using the ordinary rhythm of conversation.

Avoid jerky speech, abrupt inspirations, escape of unvoiced breath, speaking on the inspiratory current, fast and slow talking, etc.

Practise often before a mirror.

Avoid arguments, anger, excess of pleasure, late hours, abuse of tobacco and spirits, — etc.

*Exercises:*

Gymnastic exercises, and walking — with avoidance of fatigue.

Vowel exercises.

Consonant exercises.

Reading; reciting; relating anecdotes; etc.

*5. A Representative Belgian System*

Open the mouth wide.

Inhale through the mouth.

Produce sound immediately.

Study the physiological production of the different consonants and vowels.

*Exercises:*

Breathing-exercises, with respiration occurring through the nose.

Breathing-exercises, with respiration occurring through the mouth.

Vocal and articulatory exercises.

Exercises for developing precision of thought (reciting; reading; replying to questions, etc.).

Memory-culture — learning and reciting passages by heart, etc.

*6. A Representative German System*

Speak slowly and quietly (and think in a quiet and orderly manner).

Speak in a moderately loud voice.

Be sure of what you are going to say, and know how you are going to say it.

Do not attempt to say everything at once; but speak syllable by syllable, word by word, and thought by thought.

Inhale deeply (through the mouth) before speaking; do not raise the shoulders.

Speak in a rather low pitch.

Begin quietly, and prolong the initial vowel.

Regard the initial consonant of one word as the final consonant of the word preceding.

Regard the sentence as a single word, and run the syllables together. ...

## 262 SYSTEMS OF TREATING STAMMERING

Never direct the expiratory pressure upon the consonant, but always upon the vowel.

Take the vowel-position promptly.

Do not waste the breath before speaking; but commence promptly.

Speak with plenty of breath, and speak in a low voice.<sup>1</sup>

### *Exercises:*

Gymnastic exercises.

Respiratory exercises.

Vocal exercises.

Articulatory exercises.

Speaking before a mirror.

Reading; reciting; completing sentences; replying to questions; relating anecdotes; reading dialogue; etc.

### *7. A Representative Danish System*

Speak slowly — as slowly as possible at the beginning of treatment.

Avoid flurry and excitement.

Listen quietly when addressed; reflect, then reply — quietly and with composure.

Prolong the vowel of the initial syllable.

Respire strongly; regard the mouth as merely an air passage.

Repress useless movements of the head, shoulders, feet, etc.

Do not lay stress upon the consonant; do not separate it from the vowel.

Begin the vowel gently — without effort.

Open the mouth before speaking.

<sup>1</sup> A "low voice" and a "moderately loud voice" seem incompatible. The rules given above are, however, quoted or abbreviated from printed instructions.

Inhale through the mouth (but breathe through the nose when silent).

Know that you know how to speak when you observe the given rules.

Articulate clearly, but exaggerate movements of the mouth. Know what you are going to say and how you are going to say it.

Avoid excitement and emotion. Always be calm.

Be especially careful if with stammerers or persons that speak rapidly.

Be able to look any man in the eye.

*Exercises:*

Breathing-exercises; vocal exercises; reading; mirror-practice; etc.

*8. A Representative Russian System*

Observe the initial inspiration.

Employ indirect attack.

Prefix short *e* (è) to difficult words.

Articulate consonants lightly.

Lengthen the vowels, making them clear and loud.

Employ a free movement of the articulative organs.

Study the physiological production of the speech-elements.

*Exercises:*<sup>1</sup>

Respiratory exercises.

Vocal exercises.

Articulatory exercises.

Reading.

Speaking in a whisper.

Speaking rhythmically and gesticulating.

<sup>1</sup> A period of silence is observed at the beginning of treatment.

## 264 SYSTEMS OF TREATING STAMMERING

Speaking in a monotone.

Speaking in low pitch.

Speaking naturally — from memory, extemporaneously, etc.

Practising before a mirror.

Practising internal speech, etc., etc.

### *9. A Representative Austrian System*

Inhale slowly and deeply.

Control the breath in its outward passage.

Speak immediately on beginning to exhale; avoid waste of breath both before and during speech.

Speak the initial syllable with extreme care.

Speak slowly, but loudly and clearly.

Speak with moderate vigor.

### *Exercises:*

Ling's Swedish gymnastic exercises.

Respiratory exercises — with and without a spirometer.

Vocal exercises.

Articulatory exercises.

Reading — syllabically and naturally.

Answering questions.

Reading and paraphrasing stories.

Dialogue-reading.

Accommodating oneself to interruptions, requests to repeat, etc.

The reader will naturally inquire: What are the possibilities of achieving a cure with these different systems? It would be more to the point, perhaps, to speak of *impossibilities*; but we will continue. — The writer recently wrote to the principal of an American stammering-school to ascertain, if possible, the

percentage of cures that this particular "specialist" effected. In reply he received a rambling letter and a collection of circus-bills describing the activities of the institution. As this was rather indefinite, the writer made another attempt, asking the specific questions :

"Does the proportion of complete and permanent cures exceed ten per cent ?

"In cases where pupils have tried the methods of other institutions, does the proportion exceed five per cent ?

"Would you state specifically what percentage of cures you achieve ?"

The reply was as follows :

"Dear Sir :

"I am in receipt of your letter of Dec. 20th. Replying thereto will say that any case of stammering or stuttering regardless of the cause or severity of the case can be entirely and permanently cured by my methods of instructions, that is, where the individual who is under our instructions possesses the ordinary amount of intelligence. It is necessary, of course, for the pupil to do his part.

"Very truly yours,  
 \_\_\_\_\_,"<sup>1</sup>

The principal of this particular school *guarantees* to cure stammering. His reply was therefore inauspicious.

The writer continued his investigations, and at the

<sup>1</sup> The remedy employed in this school is rhythmic speech.



cost of considerable labor managed to communicate with a hundred ex-pupils of two other stammering-schools — one an American and the other an English institution, and both of them schools that *guarantee* to cure stammering.<sup>1</sup> Among these one hundred ex-pupils, *five* pronounced themselves cured. Of these five students, two have, to the writer's knowledge, since relapsed. One of the remaining three the writer met recently in New York, and this cured stammerer was beating time and speaking at the rate of approximately one word a minute. Of the remaining two, one was a school-teacher before he attended the institution. Thus we have apparently two permanent cures in one hundred cases, with one of the cures to be heavily discounted.

This percentage is not in any way exceptional. The principal of one of the foremost Swiss institutions has recently abandoned his work because he was unable to cure more than four or five per cent of his cases.

Temporary "cures," or apparent cures, are easy enough to accomplish. Dr. Coën reported 54 cures in 128 cases. (Of the remaining patients, 52 were improved, and 22 not benefited.) Dr. Klencke, with 148 patients, admits failure in only 10 instances. But the "cured" patients referred to in these reports are merely pupils pronounced cured at the time

<sup>1</sup> The majority of the correspondents attended the American school.

they leave the institution. These pupils almost invariably relapse when the vocal exercises, etc. (which probably intensify the auditory imagery), are practised less frequently or discontinued. The relapse is usually ascribed by the principals of these schools to "carelessness." But the writer could name four principals that have themselves relapsed; thus it might be better to find another argument.

The facts are that these various speech-institutions usually treat nothing but physical stammering. By removing this excrescence they often effect a spectacular improvement; but they seldom accomplish a cure. In this connection the words of Kingsley are significant:

"You can cure yourself, or *all but cure yourself*<sup>1</sup> in three months . . . if you will think over, and practise, what follows."<sup>2</sup>

The "all but" is significant; and Kingsley advises his correspondent to "keep up reading aloud, for months to come, or even for years."

Bell advises the stammerer to "work on hopefully, even though, for a time, he should seem to be 'hoping against hope.'"<sup>3</sup>

Wyneken, the reader will remember, spent two and

<sup>1</sup> Italics not in the original.

<sup>2</sup> "Charles Kingsley: his Letters and Memories of his Life," Vol. II, p. 260.

<sup>3</sup> Alexander Melville Bell, "Principles of Speech," 5th ed., p. 240.

a half years at the Katenkamp Institute, and was still not cured of his impediment.<sup>1</sup>

The writer has an acquaintance that has taken eight courses at an English stammering-school. He still seems good for eight or a dozen more.

Dr. Findley records the cogent fact that he has given "an average of at least three hours a day for forty years," to an unsuccessful attempt to rid himself of his impediment.<sup>2</sup>

It is evident that there is something lacking in the systems. The systems are deficient in that they attack merely the physical manifestations of what is in reality a psychical defect. The following paragraph presents the popular point of view :

"Causes of Stammering: There are five principal *active* causes. First, not opening the glottis so as to produce sound; second, not allowing the lower jaw to have free play; third, pressing the lips tightly together; fourth, pressing the teeth too tightly against the lips; and fifth (most difficult to get rid of), pressing the tongue tightly against the teeth or gums."<sup>3</sup>

Small wonder that men with such ideas on the nature of the malady almost invariably fail in their efforts to effect a cure. Such men know nothing about the defect. For them, everything is "stam-

<sup>1</sup> "Ueber das Stottern und dessen Heilung," p. 26.

<sup>2</sup> *The Voice*, Vol. VII, p. 53.

<sup>3</sup> And men that write this kind of nonsense usually profess to treat the *cause* of stammering. ("We treat the Cause, and not the Habit"; "I treat the cause, and not the symptoms"; etc.)

mering," — the subject's inability to speak, his physical effort in making the attempt, his bewilderment and fear, his emotive respiratory disturbances, and a dozen other secondary causes and symptoms. And this "stammering" they assail as a unitary speech-defect. Failure is naturally inevitable.<sup>1</sup>

It does not necessarily follow, of course, from the nature of past experience, that stammering is usually an incurable defect; but it does follow that the remedial systems commonly employed are grossly inadequate.

The reader may now inquire: How is it that most of the "world's greatest" "speech specialists" guarantee to cure stammering?

The answer is, of course, that they do not. When the man in the picture points his finger at you and says, "I guarantee to cure stammering," he is lying. What "speech specialists" represent as a guarantee to cure is merely a promise to refund the fees in case of failure:

"I hereby agree to return at any time all tuition fees paid by you, should my treatment fail to cure you of your impediment of speech; provided that you have in all particulars strictly followed my instructions."<sup>2</sup>

<sup>1</sup> It is so inevitable that many "specialists" reveal practically their entire systems in "free trial lessons" intended to attract prospective pupils to their respective institutions.

<sup>2</sup> Form of an English guarantee.

But most of these "iron-clad" guarantees will not bear inspection. The following is the reply of an American "speech-specialist" to a prospective pupil that had requested a copy of the much-vaunted "legal guarantee:"

"I am in receipt of your letter this morning, answering which I wish to say my guarantee is a written receipt for the money paid me for tuition."

A copy of the receipt could not be obtained.

Another American "specialist" thus responds to a similar request:

"I am in receipt of your letter of March 4th and replying thereto will say that our Guarantee Certificates are not for distribution. I wish to emphasize the fact, though, that the Certificate will be issued to you the minute you enroll in this institute as a pupil."

"Enroll as a pupil"! This means, of course, "pay the necessary fee." The student first parts with his money, and then receives what is virtually a written statement that he has been deluded.

These guarantees are of the flimsiest character,<sup>1</sup>

<sup>1</sup> "I guarantee to cure any case of stammering or stuttering I accept for treatment, and am willing to refund every cent paid as tuition if I do not fulfil my agreement to the very letter, by not imparting such instructions, which, if followed, will effect a cure."

"Mr. — guarantees that the — system, duly carried out under his guidance, affords the means of overcoming impediments of speech."

and they invariably contain the proviso that the student must "in all particulars strictly follow the instructions." "Following the instructions" may mean anything whatever. It may mean beating time, singing or drawling one's words, carrying and speaking to the beats of a metronome, and in general comporting oneself in a preëminently asinine manner. The instructions may require the pupil to talk "on rule" or "with the method" for a year or more after he leaves the institution, — and they may even require him not to stammer. When the student follows the instructions to the best of his ability and fails to obtain relief for his impediment, he will almost invariably find, if he requests a refundment of his money, that the "iron-clad" guarantee is worthless. In the first place, the guarantee is usually not issued to the student unless he makes a point of asking for it at the time that he "enrolls." In the second place, if it is "issued," it is kept in the possession of the principal till the student is discharged as "cured." In the third place, if the guarantee is ever delivered to the student, he will find that it contains a clause releasing the principal in case of non-permanency of the "cure." It might be interesting to note, too, in the fourth place, that if the student inquires into the matter, he will find that he has signed away his rights in his original "Application Blank." Signing this iniquitous instrument is part of the formal enrolment. Usually

the trusting student appends his signature to the innocent-looking "Application" without question. If he stops to examine the "blank," he will often find it an involved and highly technical document, and may eventually sign it with no clear idea of what it is all about. And if he clearly comprehends it, he may think it guileless enough while he is ignorant of what is to follow.

In his "Application" the student undertakes to remain at the institution till the principal deems it expedient for him to depart. But this never happens till the pupil has signed another statement declaring himself satisfied with the treatment he has received. If he does not sign the statement, he must board at the institution for life or leave in contravention of instructions. Usually the student signs the statement of satisfaction in order to receive his formal discharge and his written instructions for "continuation practice," which practice ostensibly insures the completion and permanency of the cure.

Figuratively, the student is bound hand and foot from the moment he signs his "Application." He is at once "put on silence" and is unable to protest, though he find himself at every turn the victim of deception. He is often required to make daily or weekly reports, and if he records difficulty in speech, he may be harassed with periods of silence and additional exercises till he finally falls into line. If at any point

in the course he should take exception to irregularities, he is expeditiously gagged with another "silence period." If he fails to observe silence, he is expelled as unruly.<sup>1</sup> He has practically no alternative but to submit to the imposture and hope that the burlesque treatment will prove effective. — The average student avoids friction and ultimately signs the statement of satisfaction (for there is no alternative; and he has, moreover, usually improved). He then continues to perform the prescribed exercises, and finds months after leaving the institution that he has been hopelessly defrauded. At this juncture he can secure a refundment of the fees only with the greatest difficulty. The "iron-clad" guarantee is worthless, and he can obtain redress only by resort to litigation.

A few years ago the writer followed a case in which an ex-pupil of an American institution undertook to enforce a return of the fees paid for a guaranteed cure of his impediment.

A formal application for refundment educed the following reply from the "specialist":

"Dear Sir:

"Answering your letter received this morning my contract with you was fulfilled when you left my institution. I owe you nothing. Your signature of *entire satisfaction* together

<sup>1</sup> All of the foregoing remarks do not apply to all institutions that "guarantee" to cure stammering. The writer is merely citing the typical case.



with the clause contained in the contract [the "Application"] signed by you referring to my *non-liability in case of recurrence of difficulty*, covers the ground perfectly. . . .

"Very truly yours,  
\_\_\_\_\_"

"Covers the ground perfectly"! It is evident that the principal feels justifiable pride in the efficiency of his technique. It is evident, too, that the fees will not be readily forthcoming. — The following is the more emphatic reply of the principal to a more emphatic letter from the student :

"Dear Sir :

"Answering your letter of June 20th received this morning, I desire to say if you are having any difficulty in your talking it is due to your own neglect and carelessness and to the non-fulfilment of requirement [beating time].

"Concerning any difficulty you may have experienced after leaving the school, there is printed across the face of the application [note the word !] you signed when you entered my institution, a clause setting forth my non-liability referring to the permanency of the cure.

"Your daily report upon our record shows you reported no difficulty whatever from the 30th of August until the 13th of October, the date of your leaving, at which time you expressed yourself in the presence of witnesses, both verbally and in writing, as perfectly satisfied. Your signature appears attached to the following :

"The terms and conditions of my Application and Agreement, Form No. 3307, having been fulfilled by —, I here-

with desire to express myself as perfectly satisfied with the result of my treatment at the —— School.

" (Signed) \_\_\_\_\_,

"I am willing to have you take any action in the matter that you may choose and am ready for you in more ways than one.

"Yours for perfect speech,  
\_\_\_\_\_,"

Here we have a veiled threat of personal violence. The student, however, was not to be deterred; and in reference to the technique he responded that, since the "Guarantee" was invalid, he would prosecute the principal for obtaining money by false pretenses. The reply to this letter emanated from the "Law Offices of ——":

"Dear Sir:

"Your letter of the 29th ult. to Mr. —— has been handed to me for reply. I have examined the papers in this matter and from your written acknowledgement of satisfaction as to the fulfilment of Mr. ——'s agreement, your daily report showing no difficulty for a long time previous to the leaving of his Institute, from examining the conditions of your signed contract [the "Application Blank"] releasing Mr. —— from liability in case of non-permanency of your cure and from other testimony that he has laid before me, I have advised him to tell you to proceed in any manner that you see fit.

"I have also had laid before me a letter written by you wherein you formally notify Mr. —— that you will prosecute him for obtaining 'this money' by false pretenses, if said money is not duly refunded. You may not be familiar with our statutes, and you must have been ill advised in writing such a letter. It

## 276 SYSTEMS OF TREATING STAMMERING

is only fair to call your attention to a provision in our law, Section 11488, 3d volume of Compiled Laws of Michigan, wherein, if any person shall by printed communication maliciously threaten to accuse another of any crime or offence with intent to compel the person so threatened to do or refrain from doing any act against his will, that the same is punishable by imprisonment. . . .

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“Attorney for ———”

Now we have a browbeating lawyer threatening imprisonment, and an irate “principal” threatening personal violence. Verily the technique is highly developed. — But in the instance we are discussing, the student was unimpressed by this kind of balderdash, and he shortly arrived upon the scene to initiate proceedings. But the technique was exhausted, and the student left in a few hours with every cent of his fees refunded.

(And this principal — the benign soul — is, if we may believe him, devoting his life to the service of others. And he *guarantees* to cure any case of stammering or stuttering that he accepts for treatment.)

So much for “legal guarantees.”

The instance cited above (with everything but the refundment of the money) gives the typical experience of countless stammerers from numerous stammering-schools. Small wonder that there exist, besides these schools, Ex-Pupils’ Leagues for combating their deceptions.

And now one may well inquire: How is it that "speech specialists" are able to produce cogent and convincing testimonials? — The answer to this question must be somewhat protracted.

In the first place, most schools display a collection of testimonials from *non-stammerers* — people that are absolutely ignorant of the subject on which they write, and know virtually nothing of the institutions they indorse.

The writer has never known of a worthless institution that was not recommended by a body of bishops, colonels, mayors, postmasters, doctors, and men that are usually credited with intelligence. — The clergy are inveterate recommenders: it seems to be a singularly painful thing for a minister of religion to refuse a recommendation to a well-disposed professor that has recounted the great good he is able to accomplish.

In America, recommendations from mayors, ex-mayors, and merchants are often obtained through "Commercial Associations," "Boosters' Clubs," and organizations for mutual support among rotten concerns that cannot exist on merit. Newspaper puffs in the local press (when not paid for) are usually inserted in the interests of "a greater Mudville."

Thus we have numerous persons with the recommending habit indorsing institutions that they know nothing about.

It is a signal fact that Alexander Melville Bell has written a glowing testimonial for a stammering-school whose method he condemns as the resort of charlatans.<sup>1</sup> No one would doubt the good faith of the distinguished phoneticist; but it is evident that if he could be deceived as to the methods and merits of an institution, the opinion of the average uninitiated person must be absolutely worthless.

The non-stammerer, even if he makes the most careful inquiries, is usually misled by the amelioration of stammering under the various systems of training. The *amelioration*, however, is nothing more than the temporary disappearance of physical stammering; and it does not constitute even the beginning of a radical cure. But the untrained mind is impressed by the overt and the spectacular; and in the case of stammering it is affected by things foreign to its illations.

But even trained observers are often deceived where stammering is concerned. It is interesting to note that the worthless "Bates' Appliances" were awarded the First Premium and the Scott Legacy Premium by the Franklin Institute. These same trinkets

<sup>1</sup> The school indorsed employs the time-beating method, concerning which Bell says ("Faults of Speech," 5th ed., p. 12): "The stammerer's difficulty is: where to turn for effective assistance. Certainly not . . . to any whose 'system' involves drawling, singing, sniffing, whistling, stamping, *beating time*—all of which expedients have constituted the 'curative' means of various charlatans."

were also awarded numerous medals and diplomas at fairs and exhibitions. Colombat, for his ridiculous and pirated methods, was accorded the Monthyon prize by the French Academy. Medals and diplomas for worthless systems of "curing" stammering are almost as numerous as the worthless systems themselves. To the average person these guerdons would betoken indubitable merit in the method of treatment; but to one cognizant of the facts they usually imply nothing more than commercial enterprise in the recipient.

And now we can consider testimonials from stammerers themselves.

At the outset we may reject all testimonials that do not attest a positive cure, or that record fluency in speech "when the instructions are strictly followed." —

"It gives me great pleasure to testify to the excellence of your System for the Cure of Stammering. I have derived great benefit from the course of instruction which I have received from you. In my estimation the worst stammerer may be cured, provided your rules are strictly adhered to."

"I feel quite sure that if the pupil will only carry out your simple rules, he will soon get cured.

"The system could not possibly be easier."

"My daughter practises the exercises with much profit. I hope very soon to see her perfectly cured."

"I am still getting on famously."

## 280 SYSTEMS OF TREATING STAMMERING

"I find that the reading under your conditions, and provided I take plenty of time and lengthen out each word, gives me no difficulty."

"In answer to your inquiry will say that I am entirely satisfied with the result of treatment, and shall be glad to speak a good word for you at any time. I shall continue to practise the exercises for some time as I wish to become a fluent talker."

"I am pleased to say that your instructions have helped me in a marked degree, and by following your rules carefully, I am sure my success will be permanent."

"It is with pleasure and gratitude I make this statement in behalf of the thoroughness and efficiency of Mr. —'s system of treatment. He has the most intellectual system ever known, having experience of his treatment. I heartily recommend Mr. — to those who are in need of such instruction."

"Having personally attended your school I am in a position to speak. If your instructions are closely followed there is no question of a cure for the worst case of stammering."

"I am much pleased with the results of my treatment at your Institution, and am satisfied that any one who follows the instructions given by you will succeed in overcoming their difficulty of stammering."

"I feel no hesitancy whatever in saying that the — School is the best Institute for the cure of stammering and stuttering in the world."

"In my opinion no stammerer can make a mistake by attending the — Institute."

"I have been getting on very well in class, and am reading there every day."

"Have derived great benefit from the course of treatment received while attending your school."

"Since I came home I have been talking splendidly, having had good opportunities, and putting myself to the test.

"If a person will follow your instructions it will be impossible to stammer."

Etc., etc.

The "greatly benefited" testimonials usually mean that the student is just leaving the institution and has overcome physical stammering. But a week later he may be ready to repudiate his indorsement and denounce the principal as a quack. The writer has known of several instances in which these were the exact circumstances. The fact that a stammerer has been temporarily benefited, and was for a short time satisfied with the treatment, implies very little.

The "if instructions are followed" testimonials are certainly interesting documents; and one wonders how such vile encomiums come to be indited. The facts are, of course, that the principals of stammering-schools periodically solicit recommendations from their former pupils; and that these ambiguous testimonials are given because of the principal's impotunity, or are furnished in return "for value received."

"I gave Mr. — the testimonial he published because of a promise by him to send me a book, which he said would assist me in perfecting my cure."



The following is the promise of a German stutter-doctor that sells his victims an expensive book on the "cure" of stammering :

"After you have written me your opinion of my book I will send you some information and practical advice that will greatly hasten the removal of your impediment."

The promise is made in a circular letter sent to purchasers of the book shortly after the work has come into their possession. The circular directly suggests that the correspondents mention what progress they have made and state the fact if they have accomplished a cure.

An American author of a trashy and expensive book pays cold cash for testimonials :

"Whenever you can write me thus : 'Your book is the thing I needed. I can apply its simple, natural principle, and it is a home cure in deed and in truth to me,' you can get \$5.00 as a promised premium."

The author supplies the very words and pays his correspondent five dollars to copy them. The same gentleman pays "ten dollars in gold" for testimonials of cure.

These facts may account for some of the ambiguous testimonials that are published. Perhaps few stammerers are tempted by offers of money "in gold," but no doubt many would be seduced by promises of help in matters pertaining to their impediment.

And now we have to consider testimonials that categorically certify a cure. Among these testimonials we may immediately reject all that are written directly after the pupil leaves the institution. At this time the pupil's imagery may be good, his confidence high, and his physical stammering nil. He is then ready to testify that he is completely cured, and that Professor Cheetem's stammering-school is the best in the world. But his cure may be brief, his world may be small, and his testimonial may be worthless.

Among testimonials written later, there is also a class to be discounted. Many ex-pupils that "have not stammered for a year" may be beating time in the hope of ultimately attaining fluency. How large a proportion of "cured" stammerers still "follow instructions" it is quite impossible to say, but most of the "cures" that the writer has encountered have been distinctly peculiar. On the same subject, different people have different conceptions.

And now we come to cures that are unmistakably genuine. Some of these are to be found in every institution. This circumstance is not surprising when one regards the fact that there are approximately three times as many stammering children as stammering adults. Late in childhood or during adolescence many stammerers gradually lose the impediment. This may occur either inside or outside of a stammering-school; but when it occurs within the institution, the

principal gets the credit. The "professor" would indeed be an unlucky mortal if none of his pupils should be undergoing this fortunate transition. — And lastly, most stammering-schools do effect an exiguous proportion of cures. But when one reflects that some institutions have treated thousands of cases, he will not be unduly impressed if two dozen pupils should testify to their permanent relief. (And he will pardon the fact if these few pupils should be staunch supporters of an unconscionable charlatan.)

And while the "professor" is waiting for these testimonials, he can treat cases "in strict confidence."<sup>1</sup> Or if he is more resourceful, he can buy his testimonials from a dumb man or a professional recommender; or he may save part of the money, and spend the rest on paper, pen, and ink.

So much for testimonials.

Some "speech specialists" impress "prospectives" by their seeming erudition. They contrive to read papers before medical societies, associations of elocu-

<sup>1</sup> An English specialist treats neurasthenia, constipation, liver trouble, skin disorders, obesity, stammering, etc., for five and a half guineas. He gives testimonials concerning some ailments, but treats stammerers confidentially.

In reply to a request for references to former pupils, he writes :

"I have received your letter dated the 15th ult. . . . I cannot, however, accede to your request because I think you will understand as I undertake to treat all cases in strict confidence I cannot send you the address of any of my patients."

tionists, etc., and make these facts of great avail in their proclamations. But the facts imply no indorsement of the "professor" or his system; the "professor," indeed, may be virtually annihilated when his paper comes under discussion.

Many ignorant quacks have their names on the title-pages of ponderous (but worthless) volumes on the subject of stammering. A large proportion of these works are, of course, written by literary "ghosts." The writer has in mind a "specialist" that has written books on stammering comprising together over a thousand pages. This gentleman cannot spell the word "off." — The less illiterate "specialists" frequently plagiarize or paraphrase from recognized authors. One conversant with the literature on stammering is constantly meeting old friends in unexpected places. The writer recently read a newly published and seemingly respectable English work on stammering in which numerous pages and paragraphs could be identified as literal translations from the German.

The writings of the "specialists" usually contain a revelation of ignorance. Naturally, the ignorance is most in evidence when the authors attempt a display of knowledge. One writer tells us that —

"In mental operations we evolve thought, which causes a slight elevation of temperature, a *rearrangement of the brain cells involved* and necessarily an expenditure of energy."

The same author informs us that the jellyfish is the lowest form of animal life. He also supplies the information that the false vocal cords are devoid of function.

Another interesting writer conveys the information that —

“A man cannot open and shut the glottis, as he does his mouth, by a voluntary effort.”

Another ignoramus says :

“You do not find stammerers amongst savage and negro races. Another curious fact — feminine stammerers far exceed masculine ones.”

This writer also declares that stammering is a “nervous functional distemper” similar to biting the nails.

Numerous writers enter the ethnological field and tell us that among the Chinese, stammering does not exist. — But these “specialists” are always most interesting when they confine themselves to their major subject and tell us how they discovered “intercostal breathing,” or how they vocalize “*square* inches of breath” by controlling the “*apreture*<sup>1</sup> of the glottis.” The reader can then discern with what type of person he is dealing. He will not be surprised at a “professor’s” deficiency in knowledge, for the

<sup>1</sup> One of the “World’s Greatest” always talks of the “*apreture*”; the word “*aperture*” does not occur in his vocabulary.

qualification for a world's greatest "speech specialist" is not merely colossal arrogance, but likewise colossal ignorance.

Most "speech specialists" are obscurantists, and they are naturally jealous of their secret methods. The stammerer that enters an institution or takes a correspondence course must usually sign an undertaking not to divulge the "method"<sup>1</sup> or engage in the business of treating stammering.

The principal of a German institution requires the pupil's signature to the following document:

"I promise not to divulge ——'s Method, and especially not to divulge it to other teachers of stammerers.<sup>2</sup> I undertake to pay a forfeit of five hundred marks if I should violate this agreement."

As a preliminary to enrolling in an English correspondence school, the pupil must agree to keep mum about the booklet that is lent him. The principal requires him to undertake in writing —

"Not to disclose any part of its contents to any person, and not to make, or allow to be made, a copy or note of any part; nor to give instruction, advice, or information of any

<sup>1</sup> Most of these secret methods have been frequently described in the literature on stammering. The writer hopes and believes that few of them have been omitted from these pages.

<sup>2</sup> It is not an uncommon practice for the "specialists" to send bogus pupils from one institution to another to investigate rival methods.

kind to any one in future on stammering or defects in speech; but when it is desired that friends should be made acquainted with the system (which is in some cases advantageous), this can be done by obtaining Mr. —'s previous consent, provided such friends are not themselves affected in speech."<sup>1</sup>

Such preposterous impudence!

For forty dollars the stammerer may *lease* from an American "specialist" a "Home-Course of Instruction," the equipment for which includes a tin talking machine. The following contract specifies the terms on which the student borrows the paraphernalia:

"Desirous of being cured of my impediment of speech, I herewith make application for a — Home-Course of Instruction for the cure of Stammering and Stuttering as indicated on the Order Blank hereto attached. If this, my application, is accepted and the course furnished to me, I agree (to the best of my ability) to faithfully carry out the instructions as directed.

"I agree, as a part of the consideration for the course, that the 18 — Records, and the — Guide, shall be used solely for the treatment of my own impediment of speech, or in case I have no such impediment of speech, then such Records and — Guide, above mentioned, will be used by only ONE person to be designated and selected by me; that the said Records and — Guide are leased to me for and during my life time, or for and during the life time of the person I may designate and select to use the same, and I, myself will not,

<sup>1</sup> The pupil must further pledge himself not to take the booklet out of the United Kingdom without the principal's written consent. He must undertake to pay a second fee; but this, says the principal, "is, of course, not for the improvement or cure, but for the advice and information at commencement in the same way as the first fee."



and the person that may be designated and selected, shall not sell, barter, offer for sale, loan, give away, rent, reproduce, copy, transfer or place in the hands of other parties any of the 18 — Records or — Guide that are supplied to me with the course of instruction, and that the same will be used in the treatment or for the benefit of only ONE case of stammering or stuttering. I further agree to forfeit all my right and title to possession of the same upon any violation of the terms of this agreement, in which event right of possession thereto shall revert to —, Principal and Founder of the — School of Stammerers, —, U.S.A.

"Further, I agree as a part of the consideration of the — Home-Course being furnished to me, I will not, neither by myself nor otherwise, teach nor cause to be taught, nor reveal to others any of the methods suggested or taught in the — Home-Course, or printed in books of instruction for the cure of stammering, published or sold by —. I promise and agree not to teach any method for the cure of stammering or stuttering, and also not to become a partner nor in any way interested nor concerned directly or indirectly in the treatment of stammering or stuttering with any person or persons whomsoever, within the limits of the United States, Canada or Great Britain, England, Ireland, Scotland, Wales and Australia, excepting in the territory of Alaska or State of Florida, U.S.A."

Students of the "association method" in psychology may be interested to learn of one of the "specialist's" favorite speech-exercises :

"Gold ! Gold ! Gold ! Gold !  
Bright and yellow, hard and cold,  
Molten, graven, hammered, and rolled ;  
Heavy to get, and light to hold ;



Hoarded, bartered, bought and sold,  
 Stolen, borrowed, squandered, doled;  
 Spurned by the young, but hugged by the old  
 To the very verge of the graveyard mould;  
 Price of many a crime untold;  
 Gold ! Gold ! Gold ! Gold !"

Some of these "speech specialists" would be interesting subjects for the Freud people; though we fear the morbidity of their minds is seldom "verdrängt."

Here is another interesting train of associations:

"I am happy to say that the great majority of my pupils, taken from such varied classes, have afforded me much edification by the virtues of honor, diligence, perseverance, and gratitude which they have evinced, but even the College of the 12 Apostles was not exempt from incredulity and treason, and I have, in a few instances, met with the same return. Pupils who had given a solemn pledge not to disclose the contents of the Manual have endeavored to establish themselves as teachers, until compelled to desist and destroy their prospectuses by the prospect of legal proceedings."

In this train of associations the psychoanalysts would no doubt find a repressed idea interrupting an unctuous outpouring of the spirit.

But it would be well to leave association and psychoanalysis, and come to non-speculative facts. — The facts are that most of these contracts are jokers. Their primary function is generally to serve as a basis for blackguarding and intimidating students that might disclose the method to some unfortunate stammerer

that has not yielded the fee. But most secret methods have for nearly a century been public knowledge; and secrecy concerning matters of public knowledge cannot be enforced. — Any clause prohibiting the pupil from subsequently treating stammering in the United States of America, the British Isles, Australia, and the moon, is also farcical. Any man that can cure stammering will find himself at liberty to do so anywhere at any time, and need not be deterred by contracts with rapacious "specialists."

It will be evident to the reader that treating stammering is with most "speech specialists" an organized *business*. As a business it will not always sustain investigation of its methods; but, for this reason, it is profitable to investigate.

Most "speech specialists" reply to the stammerer's initial inquiry by sending him a poorly disguised form-letter, in which the "specialist" figuratively weeps upon the stammerer's bosom. He portrays the terrible affliction under which the stammerer is languishing, and pleads with him to restore his self-respect and flee a stammerer's grave. — Briefly, he "rubs it in."

The following letter is a typical "leader":

"Dear Sir:

"Mr. — who was formerly the manager of our Philadelphia branch and who is now removing to California, has

sent us your recent letter referring to — treatment for stammering, and if you will write us concerning your trouble, at the same time including your replies to the questions asked in the enclosed Application Blank we will write you fully just what you may expect from the unsurpassed methods which we advise.

"Among the many calamities incidental to the human frame there are few so distressing to the sufferer and so annoying to his friends as confirmed stuttering. Not only is the whole physical frame distorted but the anguish of the mind is so severe in some cases that its healthy action is frequently impaired. Those persons who have only occasionally met with cases of defective utterance in general society, can have but a faint idea of the agony of its victims, unless they have witnessed its effects in the domestic circle, or in subjects in whose welfare they have felt interested. It is, indeed, a melancholy spectacle to see a youth, born to a good position, of refined intellect, possessing extensive information, seemingly destined to adorn society, and yet, though so highly cultivated, unable to give oral expression to his thoughts, without inflicting pain on those who listen to him, or subjecting himself to ridicule; for, while the deaf-mute is pitied, the stammerer is generally laughed at.

"But not only is the victim of defective utterance debarred from the pleasures of social intercourse, he must also give up all hope of professional success at the bar, the pulpit, the senate, and business in general, and must strike out for himself some new path for which perhaps, neither his talents nor inclination fit him. There can be no doubt that defective speech throws all the enchantments of youth and beauty into the shade and must eventually blight happiness.

"Very truly yours,

—————"

Accompanying the form-letter is usually a bundle of literature describing the institution and lauding the principal. The printed matter usually contains pictures of the enormous classes attending the institution. These pictures are commonly fakes; and the legionary body constituting the class consists in part of the principal's family, the office and teaching "staff," the servants, and anybody's friends that are accommodating enough to sit for the picture. Frequently the photograph is taken as a "souvenir" of some occasion that has attracted a number of previously invited visitors.

But the essential part of all this literature is a question-blank, from the replies to which the "specialist" undertakes to give a scientific diagnosis of the case. The questions usually disclose a keenly scientific mind. — Have you any children? Do you use tobacco? Your disposition? What are the names and addresses of other persons whom you know to stammer? The principal also inquires about one's occupation and a number of things that might lead one to suppose he was attempting a diagnosis of the bank account.

The following is an interesting diagnosis by the principal of an America stammering-school:

"Your trouble in the beginning was largely physical; but owing probably to the nervous strain and continued fear, it has gradually developed and taken on certain phases of the

mental form. Allowed to continue, this particular type of stammering becomes chronic as years go by, after a while terminating in an aggravated type of the difficulty."

Here we have a prognosis thrown in. The trouble will get worse unless the patient undergoes treatment. The facts become more disconcerting when one notes that the diagnosis is given in a form-letter, and that these alarming cases must therefore be exceedingly common. There is hope, however, if the stammerer is quick to seize the opportunity; for in the form-letter the principal says, "I am satisfied from the description furnished by you, that your case will yield readily to my treatment, and am positive I can cure you."

Most American "speech specialists" offer "prospectives" "flat rates" for an unlimited course of tuition. Charges for board and lodging during the *unlimited* course are naturally extra. The tuition-rates are usually "special."

"The plan of reduced rate for tuition herein provided for will give to you, and to a limited number of others, an opportunity to be cured of stammering, at a price very much less than the amount I have ordinarily charged. Regularly my price for tuition has been from One Hundred to Two Hundred Dollars and upwards according to the severity of the difficulty, the average pupil having paid me about One Hundred and Fifty Dollars for treatment. I am willing, however, if you will enter within four weeks from the date of this letter, to accept you for treatment for One Hundred and Forty Dollars, which

will entitle you to my GUARANTEE OF AN ABSOLUTE POSITIVE CURE."

The following offer by a Canadian principal is also very lenient :

"Regarding the cost of tuition, the fee varies from \$100.00 to \$500.00 according to the severity of the case. Owing to the nature of your trouble, we will accept you for tuition for \$100.00."

Usually the fees are rapidly reduced if the stammerer does not capitulate. The one hundred and forty dollar fee, mentioned above, ultimately shrinks to fifty-five :

"Regarding terms for tuition my special Fall and Winter Term announcement (a copy of which I enclose) is self explanatory. You will notice I am making a reduced rate to pupils who enter on or before Dec. 30th. My regular price for tuition has been from One Hundred to Two Hundred Dollars according to the severity of the difficulty, in fact the average pupil has paid me about One Hundred and Twenty-five Dollars.

"For the reason explained in the enclosed printed circular I have decided for a short time to reduce my rate, thus giving many who would otherwise be unable to come an opportunity to get cured of their difficulty. I am willing to accept you for treatment for Fifty-five Dollars on condition that you enter on or before Dec. 30th, and feel sure that it will pay me to do this as when you return home cured, I am satisfied that others from your locality who may stammer, learning of your success and cure will gladly come to my institution for treatment."



This special offer (for the purpose of placing a cure in every locality) was addressed to a stammerer in New York, where the "specialist" had guaranteed hundreds of cures already. — But who would disparage the virtue of perseverance?

The "prospective" can usually get a reduction on the quoted rates by giving his fellow-stammerers the Judas-kiss. He has merely to send in the names and addresses of a number of possible victims, and the "specialist" at once makes a concession. The following is from the literature of an "auto-suggestive correspondence stammering-school":

"The price of the course is ten dollars, but at present we wish to increase our correspondence list and will therefore make you a special offer. Send us five dollars with the names and addresses of twenty persons who stammer and you will be admitted as a regular student any time within the next two weeks."

Name-gathering contests are frequently held by "enterprising" American institutions. One institution offers the following trophies:

"**First Prize.** — A complete course of treatment at the — Institute for Stammerers will be given **ABSOLUTELY FREE OF CHARGE** to the person who sends the largest number of names, with correct addresses, of persons afflicted with **stammering** or stuttering.

"**Second Prize.** — A complete course of treatment at the — School for Stammerers will be given for Twenty-five Dollars to the person sending the second largest number of

names, with correct addresses, of persons afflicted with stammering or stuttering.

**"Third Prize.** — A complete course of treatment at the — Institute for Stammerers will be given for Fifty Dollars to the person who sends the third largest number of names, with correct addresses, of persons who stammer or stutter.

**"Other Prizes.** — Persons who enter in the contest, but fail to win one of the first three prizes, will receive credit for any number of names they may send, and will be rewarded by a reduction on their tuition fee."

A rival institution, holding a similar competition, decrees the following :

**"Rules and Regulations Governing the Contest.**

" 1. Persons wishing to enter this contest may, if they wish, secure the assistance of their friends by sending them our Name Sheets, with a request that they write upon them the names of persons whom they know to be afflicted with stammering, and forward direct to us. Each name sheet must be carefully and properly signed with the name and correct address of the person who wishes to receive credit for it.

" 2. If more than one person furnishes us with the same name, credit will be given only to the person whose letter reaches us first.

" 3. Letters pertaining to the competition will be opened by us in regular succession as received, and credit at once given to the sender.

" 4. Any name sent which has been previously furnished us, will not be counted to the credit of the sender.

" 5. Credit will not be given for names of persons who stammer who are under six years of age or over sixty.



## 298 SYSTEMS OF TREATING STAMMERING

" 6. Provided two or more persons tie by sending us an equal number of names, they will be immediately notified and the competition extended to them for an additional month, when the prize will be awarded to the one who has sent us the largest list.

" 7. Should there appear in any list the name of one person who does not stammer, the person who would otherwise receive credit for the list, will thereby be debarred from winning a prize."

The principal is evidently paying only for sterling "prospectives." But in other things he is duly considerate. He tells you to "Print if you cannot write plainly;" and, in case you are ashamed of yourself, he says: "I promise not to mention your name to any of the parties whose names you may send me and will not in any manner make known to anybody the source of the information."

Another of our "specialists" gives a free course to any one that can find five inmates for his institution. If the procurer is not a stammerer, he receives a reward of one hundred dollars.<sup>1</sup>

English stutter-doctors run the business on rather different lines. They usually charge for the length of time they can hold the pupil; and their fees are customarily in the respectable and professional guinea.

<sup>1</sup> A few American "specialists," after quoting the minimum rate, offer to find "part-time employment" for a limited number of pupils in order that they may defray living expenses while attending the institution. The "specialist's" fee, however, is inexorable.

A guinea a lesson is a very satisfying and rather popular fee. Most of the fraternity extort from five to ten guineas a week for tuition and board. However, there is usually a minimum charge; and the British stammerer is lucky if the gentleman that undertakes to relieve him of his impediment relieves him of no more than forty or fifty guineas at the finish. The charges are exorbitant; but these frock-coated frauds operate chiefly among the "superior classes." Of recent years a few cheaper schools have come into existence. They are apparently no worse than the "superior" institutions.

Among continental stammering-schools, one finds the extremes of the English and the American type, and all types intermediate.

When the stammerer pays his tuition-fee, he usually knows nothing whatever of the method the "specialist" employs. Not only does the average "specialist" bind his pupils to secrecy concerning the details of his method, but he even refuses to disclose the general nature of his system to bona-fide inquirers. An English "specialist" is categorical on this point. He answers a prospective pupil as follows:

"Replying to your letter of the 24th inst. I should not think of telling you the nature of my system, until you had placed yourself under my treatment."<sup>1</sup>

<sup>1</sup> In this instance, placing oneself under treatment means paying forty guineas for four weeks' tuition and board.

Usually the principal's reply is evasive. He will aver that he has the *only* natural and scientific method; he will insist that he treats the *cause* and not the symptoms; he will declare that his system is established on an educational basis, or that it is founded on physiological, psychological, ethnological, cosmological, and other natural laws.

Or, as often as not, the great "speech specialist" will lie:

"The aim of the instruction of the — School is to teach pupils to speak as others speak, without undue effort, in a manner that is natural."

The method of [this school is time-beating, and the student never employs natural speech during the entire course of speech-training.<sup>1</sup> Many "specialists" write books or prospectuses condemning unnatural methods, and resort to the vilest expedients in practice. The stammerer is thus misled by their literature, and deceived or thwarted in any inquiries in which he may engage.

The average "speech specialist," instead of offering the stammerer a definite and describable system, will proffer him a great discovery:

"I at last, when almost ready to give up in despair, originated a method by which I quickly accomplished that which money

<sup>1</sup> The word "aim" in the quoted sentence might be used in defence. But, none the less, the sentence is framed to conceal, rather than reveal, the truth.

and years of time had failed to secure for me, a perfect and permanent cure. . . . I found that I had involved (!) a method which would cure other unfortunate sufferers, who were being dragged back by some invisible monster, whose claws sank deeper day by day, and caused much sorrow, pain and unhappiness."<sup>1</sup>

And thus another cries *Eureka*:

"In the remarkably short period of ten days I found that I had not only succeeded in entirely eradicating every vestige of my former difficulty, but had also evolved a method of cure that must sooner or later crown with new hope the sorrowful lives of many disheartened stammerers."<sup>2</sup>

And yet another vision of light:

"Walking through one of our lovely Worcestershire lanes, and, as was my custom, talking aloud to myself and carefully watching every trip of the tongue, I suddenly became conscious of one action in speech which is imperative before freedom of utterance can be obtained. . . . When I returned home, I talked to my people, I read to them, I recited poetry; indeed, I scarcely knew what I did, I was so overjoyed. I was like a child with a new toy, and I felt like a new being."<sup>3</sup>

It is these various secrets and discoveries that the stammerer is asked to buy. Rarely indeed can he ascertain anything definite concerning the system.

Another inducement frequently offered to stam-

<sup>1</sup> The discovery: rhythmic speech and the "word-measurer."

<sup>2</sup> The discovery: time-beating.

<sup>3</sup> The discovery: initial inspiration through the mouth, and control of the breath. See "Representative English System" (p. 258).

merers is the fact that the secret or system has been patented or copyrighted. Here we are concerned with lies or paragrams. A system for curing stammering cannot be patented. At best the principal can secure a patent on some mechanical contrivance that he may employ; but the contrivance is not the *system*. A system for curing stammering cannot be copyrighted. A pamphlet named "The Dodger System" *can*; and here we have the quibble. But a copyright on a pamphlet merely gives the author the exclusive right to produce it; and no one would be fool enough to envy him the privilege. The copyright does not imply official sanction of the system; though no doubt it is the contrary impression that copyright talk is intended to convey.

Most "speech specialists" proclaim themselves the greatest in the universe. — In this connection it may be pertinent to recall the story of the four Birmingham tailors that had rival establishments on Blank Street. One day one of the tailors stole a march on the rest by displaying a sign that proclaimed him the best tailor in Birmingham. The second soon hung out a sign that declared him the best tailor in England. The third, not to be outdone, proclaimed himself the greatest tailor in the world. The fourth then by a modest sign avouched himself the best tailor in Blank Street. 'Tis said that three of these men openly lied.

The "specialists," it should be noted, are always vociferous in denouncing quacks. They abhor those nasty people, and appeal to God to exterminate the charlatans. But while the "specialist" is praying for the charlatan's extermination, it would be well for the stammerer to be careful.

In this connection we excerpt a paragraph from "The Great American Fraud":<sup>1</sup>

"Here are a few of the more conspicuous and unmistakable indications of quackery among the specialists: The advertising doctor who, having a 'cure' to sell, is 'editorially endorsed' by any publication, particularly in the religious field, is a quack. The doctor who advertises secret powers, or newly discovered scientific methods, or vaunts a special 'system' or 'method,' is a quack. The doctor who offers to sell, at a price, a cure for any ailment is a quack, and if he professes a 'special interest' in your case and promises reduced rates, he's throwing in a little extra lying for good measure. Finally, the form-letter is a sure sign. You can tell it because it begins 'Dear Friend,' or 'Dear Mr. So-and-So,' or 'My Dear Correspondent,' and contains promises that will fit any case. If, however, you are determined to give a trial to one of these 'specialists,' suggest these terms: that, since he *promises* to cure you, you will deposit to his account the full price of the treatment, to be paid

<sup>1</sup> "The Great American Fraud," p. 111. This treatise (by Samuel Hopkins Adams) deals with the nostrum evil and with quacks and quackery in general. Copies can be obtained from *The American Medical Association*, 535 Dearborn Avenue, Chicago. Paper-covered copies are supplied at ten cents, and cloth-covered copies at twenty-five cents, both post-free.

### 304 SYSTEMS OF TREATING STAMMERING

him as soon as you are cured, or substantially benefited, and not before. Then and there negotiations will cease. The promising quack will never stand behind his promises. . . . This is the final test of quackery which none of the ilk can abide.”<sup>1</sup>

The stammerer would do well to avoid as incompetent or disingenuous the man that offers a “home-course” or correspondence treatment. He would do well to avoid the man with the “Application Blank,” and likewise the guarantors, the scientific “diagnosers,” and the discoverers. He would do well to avoid men that write on blighted lives, and men that warn stammerers of future terrors. He would do well to avoid men that are too ardent in discussing their own altruism and the brotherhood of the human race; men that are by their own confession the last word in speech-specialism; and men that cure all diseases. He would likewise do well to avoid men with “copyrighted methods,” and men with systems that grow cheaper week by week; and lastly to avoid men and methods that will not stand the fullest investigation. This “Great Secret” guarded by “speech specialists” is the fact that the stammerer is being “buncoed.”

<sup>1</sup> Some years ago the writer saw this test applied to a tramp stutter-healer. The Professor guaranteed to cure stammering almost instantaneously for twenty-five dollars. The prospective pupil suggested that he would give a written undertaking to pay a thousand dollars if the cure were effected, but nothing if the Professor's system failed. The Professor responded that those were not his methods of doing business.

When all these men are eliminated, there will be decidedly fewer persons treating stammering. Those remaining will be of two classes: the good-hearted and well-meaning souls that know nothing about the malady, and the ingenuous and more intelligent students of stammering as a deep and intricate psychological problem. Men of the latter class are almost exclusively physicians, and the best of them are undoubtedly found in the German Empire. — Probably the stammerer would learn little from these men that is not accessible in reputable monographs; but he might benefit from personal contact with good teachers and from association with other stammerers.

Much success has been achieved by a few stammering-schools established especially for young children. We have already emphasized the fact that during childhood, when the secondary causes have not yet supervened, stammering usually yields readily to rational treatment. But it is not by any means necessary, and perhaps by no means desirable, that a young child be incarcerated in an institution. An intelligent mother can usually accomplish all that is possible for a stammering child *if*, instead of supinely waiting for him to "outgrow" the difficulty, she will undertake to combat the impediment.

In the first place, the child must himself be induced



to strive for fluency in speech. He must be offered a substantial and much-coveted reward for ultimate victory; and must then be helped at every stage of the contest. He must be checked *quietly* and *gently* each time that he stammers. He must be made to wait and reflect upon the words he is about to use — and to utter these words slowly and with composure. If he then speaks fluently, he should be commended and encouraged, and should be made to repeat the words in order that he may gain assurance.

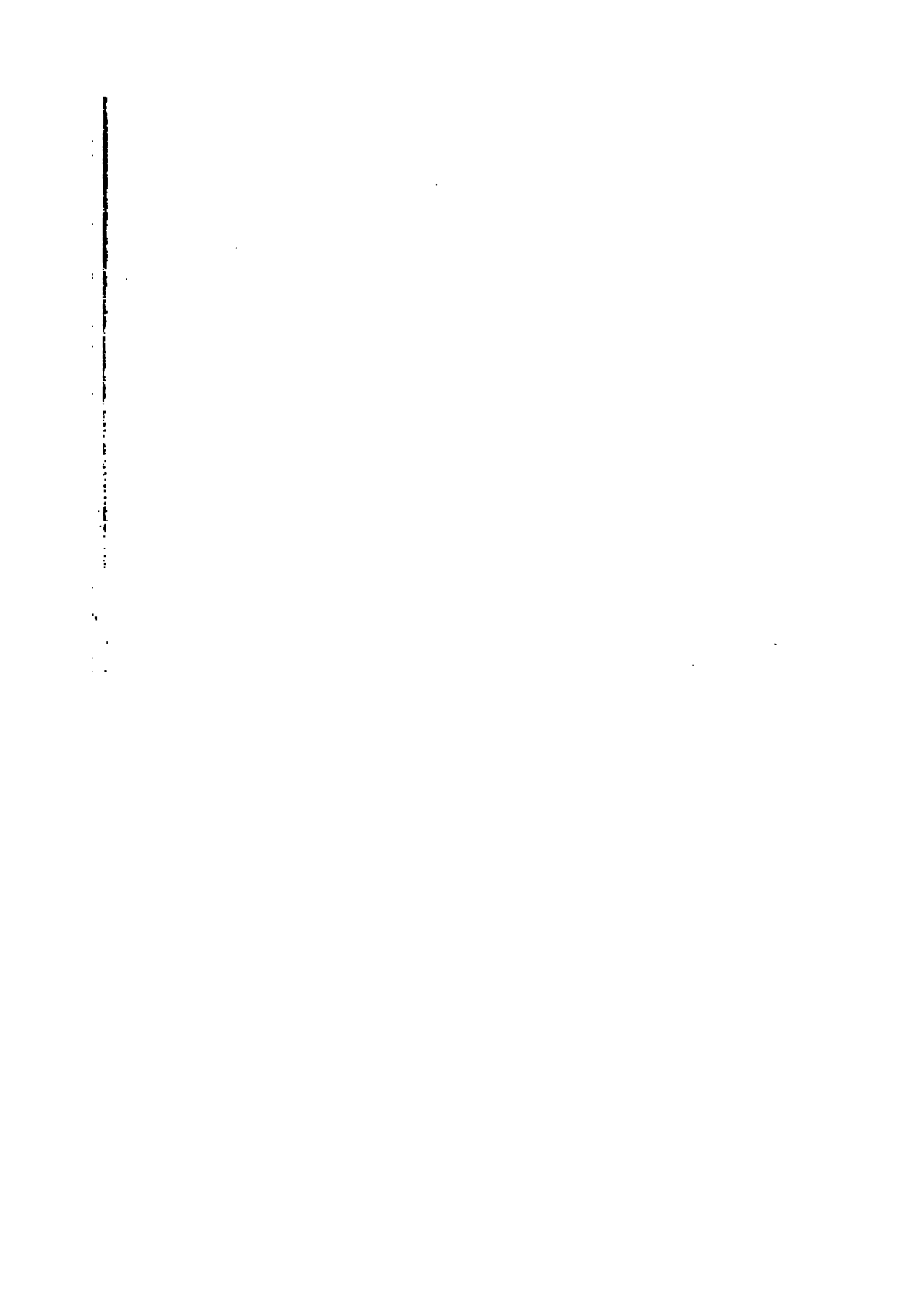
The child should be made to feel that, though it is not reprehensible to stammer, it is nevertheless highly commendable to speak with fluency. He should never be laughed at, scolded, or punished for his impediment; for, with such treatment, fear soon associates itself with speech. He should never be mimicked; and for this reason and a hundred others, should be kept from school till the impediment has been eliminated.

If much amnesia appears to be present, the child should be told to think, during speech, how his words are going to *sound*. If physical stammering is in evidence, he should be taught to inhale before speaking and to speak at all times without effort.

The child should be required, by way of practice, to learn and recite simple rhymes. He should be told little stories, and should be made to repeat each sentence slowly and carefully after the parent. Later,

when progress has been attained, he should be required to relate these stories by himself.

If mothers would adopt these simple measures, we should in a few decades hear little more of stammering.



## GLOSSARY <sup>1</sup>

**Abacus:** An instrument used in counting; often consisting of a framework with colored balls strung on wires.

**Aberrant:** Abnormal.

**Ablation:** Removal; cutting out.

**Abortion:** Figuratively, an undeveloped object.

**Abortive:** Fruitless; imperfect; undeveloped.

**Absolute:** Supreme; all-powerful. — Perfect; complete.

**Absolution:** Forgiveness; pardon; removal of penalties.

**Absolve:** To free; liberate.

**Abstract thought:** Thought that regards relations between things; thought not primarily concerned with material objects.

**Abstraction:** Inattention; absence of mind.

**Acceleration:** A quickening in motion.

**Accentuation:** The marking of the accented syllables in a word; the act of emphasizing.

**Accessorial:** Same as *accessory*.

**Accessory:** (*adjective*) Contributing; additional; holding a secondary position.

**Accessory:** (*noun*) An accessory object.

<sup>1</sup> Words that have been defined when introduced in the body of the book are, with a few exceptions, not included in the glossary. Such words should be sought in the index. The definitions given are not intended to be lexicographically exhaustive and accurate; they are framed merely to give practical assistance where occasion may require. The definitions are written for both English and American readers.

**Accessory muscles:** The smaller muscles of the body producing delicate movements.

**Acclimated:** Accustomed to a climate.

**Accredited:** Authorized; allowed; received with reputation.

**Accrue:** To arise; proceed; come; be added.

**Achoppement syllabique:** The accidental interchanging of consonants or syllables.

**Acoustic:** Relating to sound or hearing.

**Acquisition:** The act of acquiring; the thing acquired.

**Actuate:** To put into action; move; incite.

**Acumen:** Intelligence; sagacity.

**Adduce:** To bring forward; offer; present; cite.

**Adenoids:** An abnormal growth at the back of the nose.

**Adjacent:** Near; adjoining; bordering.

**Adjunct:** Help; aid; addition; accessory.

**Adjunctive:** Joining; connecting.

**Adolescence:** Youth.

**Advent:** Approach; arrival.

**Adventitious:** Accidental; casual.

**Æsthetic:** Pertaining to good taste, etc.

**Affect:** To act upon; concern; touch. — To imitate.

**Affection:** Feeling; emotion. — A disease; a disturbance.

**Afflux:** Flow.

**Affluxion:** Flow.

**Agglomeration:** Mass; cluster; collection.

**Aggravant:** Anything that aggravates or makes worse.

**Aggravate:** To make worse.

**Air-column:** The breath exhaled under pressure.

**Alias:** A false name.

**Allegory:** A figure of speech with comparisons implied; a parable.

**Alleviate:** To lessen; relieve.

**Alliteration:** A phrase or sentence having many of the words commencing with the same letter.

- Alliterative:** Relating to an alliteration.
- Amelioration:** Improvement; a making or becoming better.
- Amnesia:** Inability to arouse the memory images.
- Amnesic:** Afflicted with amnesia; caused by amnesia.
- Amorphous:** Without form; shapeless; indefinite.
- Amplify:** To extend; enlarge.
- Amulet:** A charm; an object worn as a remedy, or for protection against evil.
- Anæmia:** Deficiency of blood.
- Anæsthesia:** A loss of the sense of touch.
- Anæsthetic:** Not sensible to touch.
- Anæsthetize:** To render unconscious by administering chloroform, etc.; to render insensible to pain or touch.
- Analgesic:** Not sensible to pain.
- Analogous:** Bearing analogy or resemblance.
- Analogy:** Similarity; likeness; parallel.
- Anatomical:** Relating to anatomy or bodily structure.
- Aneurism of the aorta:** A form of tumor in the principal artery leaving the heart.
- Ankylosed:** Grown together (said of joints).
- Annihilate:** To reduce to nothing; destroy.
- Anomalous:** Irregular; not conforming to custom or rule.
- Anomaly:** Irregularity; deviation from rule.
- Antecedent:** Going before; preceding.
- Anterior:** Before; in front of. — Happening before; preceding in time.
- Anthropology:** The science or study of man.
- Antidotal:** Relating to an antidote.
- Antidote:** Anything tending to prevent or counteract.
- Antipathy:** Dislike; hatred; aversion.
- Antipodal:** Opposite.
- Antithesis:** An opposite; a contrast.
- Apathy:** Lack of feeling; indifference.

**Aperture:** An opening; a gap.

**Aphasia:** Disturbances of speech, perception, memory, etc., produced by abnormal conditions in the brain.

**Apodictic:** Indisputable; above all contradiction.

**Apoplectic:** Relating to apoplexy.

**Apoplexy:** The symptoms induced by rupture of a blood-vessel (usually in the brain).

**Append:** To add; attach; annex.

**Appetence:** An instinct; a natural tendency or propensity.

**Appose:** To apply.

**Apposite:** Fit; suitable; appropriate.

**Approximate:** To approach; come near; resemble.

**A priori:** Inherent; innate; natural.

**Arbitrary:** Not fixed; left to judgment or chance.

**Arraign:** To call in question for fault; to accuse formally; to charge.

**Arrhythmic:** Not rhythmic.

**Articular:** Relating to the joints.

**Articulation:** The pronouncing of consonants; the pronouncing of the elements of speech.

**Articulo-moteur:** A person whose verbal thought is of the motor type.

**Arytenoid cartilages:** A pair of small cartilages in the larynx or voice-box.

**Asinine:** Ass-like; stupid; silly.

**Asphyxia:** Suffocation.

**Aspirate:** A breath-sound; the letter *h* or a similar breath-sound.

**Assiduous:** Diligent; attentive; careful.

**Associational:** Relating to association (of ideas).

**Asthenic:** Weakening; depriving one of strength or control.

**Atavism:** The unnatural recurrence of a trait that was present in distant ancestors; a trait thus recurring.

- Atonic:** Without vocal sound or voice; surd.  
**Atrophy:** A wasting away; degeneration.  
**Attendant:** Accompanying.  
**Attest:** To bear witness; certify.  
**Audible:** Capable of being heard.  
**Audition:** Hearing.  
**Audito-kinæsthetic:** See footnote 1, vol. 1, p. 174.  
**Audito-moteur:** One whose verbal imagery is both auditory and motor.  
**Auditor:** A hearer; a listener.  
**Auditory:** Relating to hearing.  
**Auditory-motor:** Both auditory and motor.  
**Augment:** To increase.  
**Aural:** Relating to the ear; relating to hearing.  
**Automatism:** Automatic action. — An involuntary or automatic movement.  
**Automaton:** An object that moves automatically and without thought.  
**Autopsy:** A post-mortem examination; inspection of a body after death.  
**Auto-suggestion:** Self-hypnotism.  
**Auxiliary:** An aid; an accessory; something employed to assist.  
**Aversion:** Dislike; disgust.  
**Avouch:** To declare; affirm; acknowledge; confess.
- Balderdash:** Nonsense.  
**Banal:** Commonplace; trivial.  
**Baton:** A staff used by the conductor of an orchestra.  
**Belladonna:** A drug; a medicine.  
**Biceps:** The large muscle in the forepart of the upper arm.  
**Bi-convex:** Convex on both sides; bulging on both sides.  
**Bicuspid:** The fourth and fifth teeth counting from the middle of the jaw.



- Bilateral:** On both sides; two-sided.
- Binary:** Double; consisting of two parts.
- Biological:** Relating to biology, the science or study of life and living objects.
- Bisexual:** Being of both sexes; two-sexed.
- Bizarre:** Odd; peculiar.
- Bizarrie:** Oddity; freak.
- Boggle:** To make a bungle of; perform awkwardly; hesitate; stop.
- Bona-fide:** In good faith; without deceit; genuine.
- Brazier:** A pan for holding live coals.
- Brochure:** A pamphlet.
- Bromide of potassium:** A drug; a medicine.
- Buccal cavity:** The cavity of the mouth.
- Burlesque:** Ridiculous.
- 
- Cachexia:** General bad health; poorness of nutrition.
- Cadence:** Modulation; accent; inflection.
- Café chantant:** A concert-hall or concert-garden where light refreshments are served.
- Calibre:** Bore; internal diameter.
- Canard:** A hoax; a farce.
- Capitulate:** To surrender.
- Cardiac bruit:** Abnormal heart sounds.
- Cardinal:** Chief; principal.
- Cartilaginous:** Of the nature of cartilage; gristle-like.
- Casual:** Accidental; occurring by chance.
- Cataclysm:** A sudden and overwhelming change; a catastrophe.
- Catalepsy:** Loss of motion and sensation; loss of consciousness; a trance.
- Cataplexy:** Complete paralysis; utter prostration.
- Categorical:** Positive; absolute.
- Catholicon:** A cure-all; a panacea.

- Causal:** Relating to a cause or causes.  
**Causality:** The relation between cause and effect.  
**Causative:** Relating to cause.  
**Cent:** A halfpenny.  
**Centenary:** The hundredth anniversary.  
**Central nervous system:** The brain and spinal cord.  
**Cerebral:** Relating to the cerebrum.  
**Chafe:** To fret; to become excited or heated.  
**Chagrin:** Vexation; disappointment mingled with shame.  
**Chaos:** Confusion; disorder.  
**Characteristic:** A trait; a feature.  
**Characterize:** To describe; distinguish; designate; mark.  
**Charlatan:** A quack; an imposter.  
**Chorea:** St. Vitus's dance; a disease accompanied by irregular and involuntary movement of the limbs.  
**Chromatic:** Relating to color. — Consisting of a succession of semi-tones.  
**Circular letter:** A letter mailed in the same form to a number of persons.  
**Circumflex inflection:** An inflection involving both rise and fall of pitch.  
**Circumlocution:** A roundabout phrase; a phrase expressing an idea indirectly.  
**Circumspect:** Cautious; prudent.  
**Circumvent:** To gain advantage over; get the better of; outwit. — To pass around in a circle.  
**Citation:** A passage cited or quoted; the act of citing or quoting.  
**Clangor:** Clank; clang.  
**Clavicle:** The collar bone.  
**Clonus:** An irregular spasm.  
**Cluttering:** Confused speech in which the words are not properly articulated.  
**Coalesce:** To unite; blend; fuse; grow or come together.

- Coerce:** To compel; constrain; force.  
**Coexist:** To exist at the same time.  
**Cogent:** Forceful; convincing; compelling.  
**Cognate:** Allied; related.  
**Cognizance:** Knowledge; observation; notice.  
**Cognizant:** Having knowledge of; knowing.  
**Coherent:** Logically connected; sensible; clear.  
**Collateral:** Secondary; subordinate; auxiliary; attendant.  
**Colleague:** Companion; partner; associate.  
**Collocate:** To set or place together.  
**Collocation:** Grouping; arrangement.  
**Coloration:** The state of being colored; color.  
**Colossal:** Immense; enormous.  
**Commensurate:** Equal; proportional.  
**Commentary:** A comment; a systematic discussion.  
**Commissural fibres:** Fibres connecting the opposite hemispheres of the brain.  
**Compensatory:** Compensating.  
**Complementary colors:** Pairs of colors that produce white or gray when blended.  
**Complex:** A complicated group or system.  
**Component:** Forming a part of a thing; composing; constituting.  
**Comport:** To behave; to conduct.  
**Composite:** Compounded; made up of distinct parts.  
**Compressive:** Characterized by muscular pressure.  
**Concatenate:** To link together; unite in a series.  
**Concavity:** Depression; hollowness.  
**Concomitant:** Accompanying; attending.  
**Concrete:** Individual; particular; real; material.  
**Concrete thought:** Thought concerning real or concrete objects.  
**Concur:** To agree; assent.  
**Concurrently:** Together; unitedly.  
**Conduce:** To help or tend to bring about as a result.

- Conformation:** Form; shape; position.
- Conformity:** The act of conforming; agreement; correspondence; harmony.
- Congential:** Existing at birth.
- Congeries:** Collection; group; assemblage.
- Congestion:** Excessive accumulation of blood in an organ.
- Conjoin:** To join; unite.
- Conjoined:** Joined; associated; combined.
- Conjoint:** United; connected; associated.
- Connate:** Existing at birth; congenital.
- Consecution:** Succession; consecutive order.
- Consentaneous:** Simultaneous; occurring at the same time.
- Consonantal:** Relating to a consonant or consonants.
- Consort:** Companion; partner; associate.
- Constrained:** Held back; repressed; embarrassed.
- Constrict:** To contract; cause to shrink.
- Consummate:** (*adjective*) Complete; perfect.
- Consummate:** (*verb*) To complete; to perfect.
- Contemporaneous:** Existing at the same time; existing at the present time.
- Conterminous:** Contiguous; bordering upon; touching at the boundary.
- Contiguity:** Nearness; proximity; contact.
- Contiguous:** Adjacent; meeting; touching.
- Contingency:** Possibility of happening; an unpredictable event.
- Contour:** Outline.
- Contracture:** A permanent contraction of muscles.
- Contradistinction:** Distinction by unlike or opposite qualities.
- Contravention:** Defiance; violation.
- Contretemps:** An unexpected accident.
- Convalescent:** Relating to convalescence or the recovery of health after sickness.
- Conversableness:** A disposition to converse; talkativeness.

**Conversant:** Intimately acquainted; knowing and understanding.

**Convolution:** A fold; twist; coil.

**Convulsions:** A disturbance accompanied by violent agitation of the limbs and body; fits.

**Convulsive:** Relating to convulsions; marked by intermittent muscular contractions.

**Coöperate:** To work or act together.

**Coördinate:** (*adjective*) Having equal importance.

**Coördinate:** (*verb*) To harmonize; adjust for proper action.

**Corollary:** A consequent truth; a truth following obviously from another truth already demonstrated.

**Corporeal:** Bodily.

**Correlate:** (*noun*) Counterpart; corresponding part.

**Correlate:** (*verb*) To compare; arrange; connect; determine the relations between.

**Correlation:** Relationship; connection.

**Cortical:** Relating to the cortex or gray matter of the brain.

**Cosmological:** Relating to cosmology, the science of the universe.

**Costal-abdominal:** Involving the ribs and abdominal muscles.

**Counterpart:** A copy; duplicate; corresponding part.

**Cranium:** The skull.

**Crescent moon:** The increasing or new moon.

**Criterion:** Standard; measure; test.

**Critique:** Criticism.

**Culminate:** To attain the highest point or degree; to reach a final effect.

**Cumulative:** Accumulating; increasing by addition.

**Cunei:** Plural of *cuneus*, one of the convolutions of the brain.

**Current:** Belonging to the present time; in present progress or being.

**Curriculum:** A course of study.

**Cursory:** Hasty; slight; superficial.

**Cutaneous:** Relating to the skin.

- Data:** Facts; premises; given conditions.
- Debilitate:** To weaken; enfeeble.
- Declaim:** Recite.
- Declamatory:** Relating to declaimed speech or a declamation; relating to a recitation.
- Decussation:** A crossing.
- Definition:** Clearness of outline; clearness of detail.
- Deflate:** To remove the air from.
- Defunct:** Dead.
- Degenerate:** To undergo morbid changes; deteriorate; become of a lower type.
- Deglutition:** The act or power of swallowing.
- Deleterious:** Injurious; harmful; unwholesome.
- Delimited:** Limited; bounded; confined.
- Demarcation:** Separation.
- Demented:** Insane.
- Demerit:** The opposite of merit; that which deserves blame or condemnation.
- Demonstrative:** Pointing out; indicating. — Given to strong exhibition of feeling.
- Denominate:** To name; call.
- Dento-labial:** A consonant requiring both teeth and lips for its articulation.
- Depredator:** A plunderer; destroyer.
- Deprivation:** Loss; the state of being deprived of.
- Derivative:** A word formed from another word.
- Desideratum:** That which is desirable or desired.
- Designate:** To point out; indicate; name.
- Destitute:** Without; unprovided with.
- Desultory:** Rambling; loose; immethodical.
- Detriment:** Injury; disadvantage.
- Dexterity:** Skill; expertness.
- Dextrality:** Right-handedness.

**Diabetes:** A disease.

**Diablerets:** A mountain.

**Diacritic:** A diacritical mark.

**Diacritical:** Distinguishing; distinctive.

**Diagnose:** To identify (a disease); to ascertain the nature of (a disease).

**Dialectical:** Relating to a dialect.

**Diaphragm:** The dome-shaped muscle separating the chest cavity from the abdominal cavity.

**Differentiate:** To discriminate between; mark the differences between; subdivide.

**Diffuse:** To spread; expand; extend.

**Dilation:** Expansion; enlargement.

**Dilemma:** A perplexing position.

**Diphthong:** A vowel made up of two different sounds.

**Directive:** Directing.

**Directory:** Directing.

**Disavow:** To deny.

**Discrepancy:** Disagreement; difference.

**Discrete:** Separate; distinct.

**Discriminate:** To detect a difference or a distinction; to make a difference or distinction.

**Disingenuous:** Not ingenuous; not open, frank, and honest.

**Disintegrate:** To fall to pieces; crumble; break up.

**Disjoin:** To separate.

**Dismember:** To divide; break into parts.

**Disparate:** Different; dissimilar; unlike; separate.

**Displode:** To explode; articulate.

**Disposition:** Arrangement; order; the manner in which things are placed.

**Disproportion:** Inequality; lack of proportion.

**Dissolution:** A breaking up; a going to pieces; retrogression; degeneration; the process opposite to evolution.

**Distance-receptor:** A sense that gives one knowledge of things at a distance — of things not actually touching the body.

**Distend:** To stretch; swell; enlarge.

**Diversity:** Difference; dissimilarity; variation.

**Divine:** To ascertain; find out; guess.

**Doggerel:** Having a loose, irregular measure.

**Dollar:** Four shilling and twopence.

**Dorsal:** Relating to the back; posterior; behind.

**Draughts:** Checkers.

**Draughtsman:** One that draws plans or designs.

**Dual:** Double; consisting of two.

**Dubiety:** Doubt.

**Dynamogenesis:** The origin or production of nervous energy.

**Dynamometer:** An instrument used for testing the strength of the hand-grasp.

**Dyslalia:** Difficulty in speech; stammering.

**Dyspepsia:** Indigestion; chronic indigestion.

**Ebullition:** A state of agitation.

**Eclectic:** Selective; picking out; taking here and there; made from what is selected from different systems.

**Ecstasy:** Rapture; enthusiasm; overpowering emotion; the state of being beside oneself.

**Educe:** To call forth; draw out.

**Efface:** To blot out; wipe out.

**Effect:** To cause; bring about; accomplish.

**Effluent:** Outgoing; flowing out.

**Effusive:** Gushing; pouring forth.

**Ego:** The self; the subjective or mental self.

**Egregious:** Remarkable; extreme.

**Ein Billet zum ersten Rang:** A ticket for the first circle.

**Ein Parkett-billet:** A ticket for the parquet; a ticket for the orchestra-stalls or the pit.



- Elemental:** Simple; not compound or complex; of the nature of an element.
- Élève:** Apprentice; student.
- Elicit:** To call forth; bring out.
- Eliminate:** To remove; expel.
- Elocution:** The art of correct utterance or delivery of words; training in correct utterance, etc.
- Elongate:** To lengthen; extend.
- Elucidate:** To make clear; explain; illustrate.
- Emanate:** To come from; issue; proceed.
- Embryonal:** Relating to embryology, the science of development.
- Emotive:** Relating to emotion; expressing emotion.
- Emotivity:** Emotion; capacity for emotion.
- Empirical:** Relating to experience and observation rather than to scientific knowledge; used and applied without science; relating to quackery.
- Empiricism:** Empirical practice; quackery.
- Encomium:** An expression of praise; a commendation.
- Encroach:** To make inroad upon; trespass upon.
- Encumbrance:** Burden; hindrance; load.
- End-organs:** Sense-organs.
- Endow:** To enrich or furnish with.
- Enervate:** To render feeble; weaken.
- Engender:** To produce; cause; bring forth.
- Enhance:** To increase; advance; intensify.
- Enigmatical:** Obscure; puzzling; relating to a riddle.
- Enjoin:** To order; direct; admonish; prescribe.
- En masse:** In mass; as a body; all together.
- Enounce:** To pronounce; enunciate.
- Enregister:** To register; record.
- Entail:** To involve; impose; necessitate; bring about as a result.
- Entity:** A thing existing individually.

- Enunciate:** To pronounce; utter; articulate.
- Envelop:** To surround; enclose.
- Environal:** Affected by environment or surroundings.
- Ephemeral:** Short-lived; brief.
- Epilepsy:** A nervous disturbance accompanied by loss of consciousness, convulsions, foaming at the mouth, etc.
- Epiphenomenon:** An added phenomenon; something occurring afterwards; something purely secondary.
- Epistaxis:** Nose-bleed.
- Equable:** Uniform; regular; even.
- Equilibrium:** Balance.
- Equivalent:** Counterpart; representative.
- Erasure:** Something erased or scratched out.
- Erotic:** Relating to love; relating to sexual desire.
- Erroneous:** Marked by error; incorrect.
- Erudition:** Learning; scholarship.
- Eschew:** Avoid; shun.
- Et cetera:** Etc.; and so forth.
- Ethical:** Relating to ethics, morals, or behavior.
- Ether-waves:** Waves in the ether, a substance supposed to fill all space.
- Ethnological:** Relating to ethnology, the science of the natural races and families of men.
- Etiological:** Relating to etiology, the science of the causes of disease.
- Etymology:** The history of a word; the science that deals with the history of words.
- Eureka:** Literally, "I have found (it)."
- Evanescent:** Vanish; fleeting; disappearing.
- Evocation:** An evoking; a summoning; a calling forth.
- Evoke:** To call forth; summon.
- Exacerbation:** A growing or making worse.
- Excerpt:** (*noun*) A passage quoted; an extract.

- Excerpt:** (*verb*) To pick out; take out; quote; cite.  
**Excise:** To cut out.  
**Exclamatory:** Containing or expressing exclamation.  
**Excescence:** An unnatural outgrowth or addition.  
**Execrable:** Detestable; hateful.  
**Exemplify:** To show or illustrate by example.  
**Exhale:** To breathe out.  
**Exhaustive:** Extremely thorough; complete.  
**Exhort:** To urge; advise; incite.  
**Exigency:** Urgency; pressing necessity.  
**Exiguous:** Small; minute.  
**Expedient:** (*adjective*) Advisable; suitable under the circumstances.  
**Expedient:** (*noun*) A means employed to accomplish an end; a device; a shift; a resource.  
**Expeditious:** Quick; speedy.  
**Expiratory:** Relating to expiration, the act of breathing out.  
**Expletive:** A profane interjection; an oath.  
**Exposition:** Discussion; explanation.  
**Ex post facto:** Introduced afterward; occurring after the fact.  
**Expunge:** To blot out; wipe out; efface.  
**Extemporaneous:** Composed offhand or on the spur of the moment.  
**Extirpate:** To cut out; excise; destroy.  
**Extraneous:** Foreign; external; having no real relation to a thing.
- f:** And the page following.  
**ff:** And the pages following.  
**Facetious:** Humorous; witty.  
**Facial:** Relating to the face.  
**Facilitate:** To make easy or less difficult.

- Factitious:** Created by art rather than nature; artificial.
- Fallacious:** False; misleading; deceptive.
- False vocal cords:** A pair of membranous folds above the true vocal cords.
- Faradic:** Relating to an induced current, a current that is regularly and frequently interrupted.
- Faradisation:** Treatment with a faradic current.
- Farcical:** Of the nature of a farce.
- Fear-neurosis:** A nervous disturbance marked by fear.
- Febrile:** Relating to a fever.
- Fetishistic:** Superstitious.
- Fiasco:** A conspicuous failure; a farce.
- Fiat:** Literally, "let it be done"; the decision to act.
- Fidelity:** Faithfulness; adherence to truth or fact.
- Filament:** A fibre; a thread.
- Filial:** Issuing from as offspring; relating to a son or daughter.
- Fixate:** To focus with the eyes; look at intently.
- Flageolet:** A musical instrument somewhat resembling a flute.
- Flex:** To bend.
- Flexibility:** The quality of being flexible or pliable.
- Fluctuate:** To waver; pass back and forth.
- Foci:** Plural of *focus*.
- Focus:** A point of concentration; central point.
- Formative:** Giving form; relating to formation.
- Formulate:** To give form to; to put or state in exact form.
- Frænum:** The small band or ligament beneath the tongue.
- Fraternity:** A brotherhood; an organized body.
- Freebooter:** One that roams in search of plunder; a robber.
- French leave:** Secret departure or absence.
- Fricative:** Marked by friction of the breath.
- Frugal:** Sparing; saving.
- Fugacious:** Fleeting; vanishing; disappearing.
- Fugitive:** Readily escaping; fleeting.

**Functional:** Relating to function or action.

**Fundamental:** Principal; most important.

**Futile:** Useless; idle; unavailing; vain.

**Galvanic current:** The continuous current from a battery.

**Gamboge:** A yellow pigment; a yellow coloring substance.

**Genera:** Plural of *genus*.

**Generic:** Relating to a genus; embracing a large class; **general**; comprehensive.

**Genesis:** Origin.

**Genitalia:** The genitals; the sex-organs.

**Genus:** A group; a larger group than a species. — **Variety**; kind; sort.

**Germane:** Related; closely connected; appropriate.

**Gist:** The main point; the essence of the matter.

**Glosso-mochlion:** Tongue-lever.

**Glottal:** Relating to the glottis.

**Glottis:** The opening between the vocal cords; this opening together with the cords.

**Gold brick:** A worthless object represented as of great value and sold for a large sum of money.

**Gorget:** A piece of armor for defending the throat and neck; a kind of breastplate.

**Grandiloquent:** Pompous; bombastic; lofty in speech.

**Graphic:** Written; drawn.

**Gratuitous:** Not warranted by the circumstances; not justified; made or done without sufficient cause or reason.

**Gross:** Large; extensive.

**Guinea:** An English coin of the value of twenty-one shillings, or slightly more than five dollars.

**Gustative:** Relating to the sense of taste.

**Guttural:** A consonant or sound produced in the throat.

**Gyrus:** Convolution; fold.

**Habitant:** Inhabitant.

**Habituate:** To accustom.

**Hæmorrhage:** Bleeding; an escape of blood from its` natural channel.

**Hallucination:** An abnormal condition in which mental images are mistaken for sensations.

**Hallucinatory:** Relating to an hallucination.

**Harmonic:** Relating to musical or other harmony.

**Hashish:** A drug.

**Hegemony:** Position of supreme command; leadership; authority.

**Hemiplegia:** Paralysis on one side of the body.

**Hemisphere:** A half-sphere.

**Hereditable:** Capable of being inherited.

**Heterodox:** Not orthodox; contrary to a standard or opinion.

**Hiatus:** A gap; an opening.

**Hieroglyph:** A drawing used as a symbol.

**Homonym:** A word having the same sound as another but a different meaning.

**Homo sapiens:** Man.

**Horizontal:** Level; parallel to the horizon.

**Hors de combat:** Out of the combat; disabled.

**Hortatory:** Giving exhortation or encouragement.

**Hydrophobia:** Dread of water; the disease produced by the bite of an animal affected with rabies.

**Hygienic:** Relating to health; promoting health; sanitary.

**Hyperæmia:** Congestion; excess of blood in a part.

**Hypertrophy:** Overgrowth of an organ; overdevelopment.

**Hypochondria:** Unnatural anxiety concerning the health; a state of mental depression; low spirits.

**Hypothesis:** Supposition; assumption; theory.

**Hysteria:** A nervous disease in which the patient lacks normal self-control and may be the victim of imaginary afflictions.

- Idio-activity:** Self-induced activity; self-caused activity.  
**Idiosyncrasy:** A personal peculiarity; an individual trait.  
**Illation:** Conclusion; deduction; inference.  
**Illiterate:** Ignorant; unlettered.  
**Illumination:** Brightness; a lighting up.  
**Illusion:** A false perception; a misinterpretation of impressions.  
**Imbue:** To cause to imbibe; to infuse; to fill.  
**Impair:** To lessen in value; weaken; enfeeble.  
**Impel:** To urge or drive forward.  
**Impend:** To threaten; to be close at hand or just about to occur.  
**Impetuous:** Hasty; rushing forward; violent.  
**Impinge:** To strike or dash against; collide.  
**Import:** Meaning; sense.  
**Importunity:** Urgent request; continual asking.  
**Impotent:** Lacking power; disabled; weak.  
**Improvise:** To produce or compose on the spur of the moment.  
**Impugn:** To attack by words or arguments; to insinuate against.  
**Impulsion:** Impulse; the act of impelling or driving.  
**Imputable:** That may be imputed to or charged against; chargeable; attributable.  
**Inanity:** Anything inane or foolish.  
**Inapt:** Not apt or appropriate.  
**Inaudible:** Not audible or capable of being heard.  
**Inauspicious:** Boding ill; furnishing an unfavorable omen.  
**Incarcerate:** To shut up; confine; imprison.  
**Inception:** Beginning; commencement.  
**Incestuous:** Relating to incest or sexual intercourse between persons so nearly related that marriage between them would be unlawful.  
**Inchoate:** Rudimentary; incomplete; begun but not finished.  
**Incipient:** Beginning; commencing; incomplete.  
**Incisors:** The four middle teeth of either jaw.  
**Incite:** To move to action; cause to act; stimulate.

**Incompatible:** Contrary; not able to exist together.

**Incomprehensible:** Not capable of being comprehended or understood.

**Incontinently:** Without restraint.

**Incontrovertible:** Indisputable; too certain to admit of dispute.

**Incoördinate:** Lacking coördination or adjustment.

**Incorporate:** To include; embody; unite.

**Inculcate:** To impress; implant; teach; enforce.

**Incumbent:** Resting upon one as a duty or obligation.

**Indelible:** Incapable of being blotted out.

**Indeterminate:** Indefinite; uncertain; not precise.

**Index-finger:** The forefinger; the pointing finger.

**Indiscipline:** Want of discipline; deficiency of control.

**Indiscriminate:** Without distinction; confused; not making distinction.

**Indite:** To compose; write; commit to written words.

**Indolent:** Lazy; sluggish.

**Indubitable:** Undoubted; unquestionable.

**Induce:** To cause; bring on; produce.

**Ineptitude:** Lack of skill.

**Inertia:** Resistance; indisposition to move; inertness.

**Inexorable:** Unyielding; immovable; relentless.

**Inexplicable:** Not capable of being explained.

**Inflection:** The raising or lowering of the pitch of the voice; modulation of the voice.

**Ingenuous:** Open; frank; honest; sincere.

**Inhale:** To breathe in; to draw air into the lungs.

**Inhere:** To be fixed in; to be an inseparable part of.

**Inheritable:** Capable of being inherited.

**Inhibit:** To restrain; hinder; check; repress; hold back.

**Inimical:** Harmful; hostile; unfriendly.

**Iniquitous:** Wicked.

**Initial:** First; placed at the beginning; opening; incipient.



- Initiate:** To originate; bring about; start; begin; institute.  
**Initiative:** A first step; beginning; start; lead.  
**Injunction:** Command; order; precept; exhortation.  
**Innate:** Inborn; natural; inbred.  
**Innervate:** To give the nervous stimulus or impulse to.  
**Innovation:** A change in custom; something newly introduced.  
**Inordinate:** Excessive; immoderate; undue.  
**Inscrutable:** Obscure; mysterious; not capable of being understood.  
**Insentient:** Without feeling.  
**Inspire:** To inhale; to breathe in.  
**Instigate:** To incite; provoke; originate; stimulate to action.  
**Insuperable:** Insurmountable; incapable of being overcome.  
**Intangible:** Vague; dim; incapable of being grasped or touched.  
**Integral:** Complete as an entity; entire; whole; necessary to make a whole.  
**Integrity:** Wholeness; entireness; unbroken state. — Honesty; uprightness.  
**Intensify:** To make stronger or more intense.  
**Intensity:** Strength; the state of being strong or intense.  
**Interblend:** To blend together; intermingle.  
**Intercalate:** To insert; interpolate.  
**Intercostal:** Between the ribs.  
**Interjection:** An exclamation; a word suddenly uttered to express emotion.  
**Interlocutor:** A questioner.  
**Interminable:** Endless.  
**Intermit:** To interrupt; suspend; cause to cease for a time.  
**Interpolate:** To insert.  
**Interrogate:** To question.  
**Intimidate:** To make afraid; cause to become frightened.  
**Intractable:** Obstinate; ungovernable; not responding to treatment.

- Intrinsic:** Real; true; inherent; inward; genuine.
- Introspect:** To look within the mind; to examine the workings of the mind.
- Intuitive:** Perceived by the mind immediately and without any process of reasoning.
- Invective:** Abusive; railing; expressing censure or reproach.
- Inveigh:** To exclaim or rail against; to censure.
- Inversion:** A reversing; a placing in opposite order.
- Invert:** To reverse; place upside down; place in opposite order.
- Invest:** To endow; clothe; dress.
- Inveterate:** Confirmed in a habit or practice.
- Invoke:** To call into activity; summon; conjure; appeal to.
- Involuntary:** Independent of will or choice.
- Involvement:** The state of being involved or implicated.
- Iodide of potassium:** A drug; a medicine.
- Ipecacuanha:** A drug; a medicine.
- Irate:** Wrathful; angry.
- Irradiate:** To spread like rays from a center; to diffuse.
- Irrelevant:** Foreign to the subject; not bearing on the matter under consideration; inapplicable.
- Irruptive:** Invading; rushing in or upon.
- Italicize:** To print in italics or slanting type.
- Itinerant:** Wandering; passing or travelling about a country.
- Jeu d'esprit:** A play of wit or fancy; a joke.
- Jocund:** Sportive; gay; merry.
- Juncture:** A point of time.
- Kaleidoscopic:** Resembling the figures of a kaleidoscope; changing in color and form.
- Kinæsthetic:** Motor; relating to muscular movement.
- Knee-jerk:** The involuntary jerk or kick that results from a blow delivered immediately below the knee-cap.
- Kulturmenschen:** Civilized people.

- Labial:** Relating to the lips.
- Laboratory:** A building or room in which scientific work is conducted and experiments are performed.
- Laceration:** A tearing.
- Lacuna:** A gap; space; vacancy.
- Lallation:** Lalling (especially lalling on the letter *r*).
- Lalling:** Inability to articulate clearly; an infantile form of speech.
- Lalophobia:** Speech-fear; the fear of talking.
- Laminate:** Made up of layers or thin plates.
- Languish:** To fade; wither; become spiritless.
- Lapidary:** Inscribed upon stone; inscribed upon tombstones.
- Laryngeal:** Relating to the larynx.
- Larynx:** The upper part of the windpipe containing the organs of voice.
- Lasciviousness:** Lustfulness; indulgence in animal desires.
- Laud:** To praise; extol.
- Leash:** A line; a thong; a cord; a line by which an animal is held in check.
- Legible:** That may be read; distinct; easily deciphered.
- Legionary:** Relating to a legion; containing a great number.
- Lesion:** A hurt; a wound; an injury; a changed condition due to disease.
- Lethargic:** Sluggish; dull; heavy.
- Levator labii superioris alæque nasi:** One of the facial muscles.
- Lexicon:** Dictionary.
- Lexicographical:** Relating to a dictionary or the writing of a dictionary.
- Liaison:** An intrigue; sexual intimacy.
- Lingual:** Relating to the tongue.
- Linguistic:** Relating to language.
- Linguo-palatal:** Requiring both tongue and palate for articulation.
- Liquor arsenicalis:** A medicine.

- Litigation:** The process of carrying on a suit in a court of law.
- Localize:** To be local; to make local; to assign a definite position to; to refer to a particular location or area.
- Loc. cit.:** Loco citato (in the place or work cited).
- Longevity:** Length or duration of life.
- Longitudinal:** Lengthwise.
- Lucrative:** Profitable; gainful.
- 
- Malaise:** Uneasiness; discomfort; indisposition.
- Malevolent:** Unfavorable; unpropitious; bringing calamity.
- Malformed:** Abnormally formed; ill-shaped.
- Malignant:** Harmful; malicious.
- Mandarin:** A Chinese official.
- Mandibular:** Relating to the lower jaw.
- Manifold:** Many; numerous; of different kinds.
- Manipulate:** To handle; to work or operate with the hands.
- Manceuvre:** A movement; a change in position or arrangement.
- Manual:** A handbook.
- Manual alphabet:** Hand-language; the deaf and dumb alphabet.
- Mark:** A German coin of the value of about twenty-four cents.  
A German coin of the value of about a shilling.
- Masquerade:** To go in disguise; to cover up or conceal as with a mask.
- Masticatory:** A substance chewed in order to increase the flow of saliva.
- Maturation:** The process of maturing or ripening.
- Maxim:** A rule; principle; saying.
- Mechanician:** A mechanic; a machinist; one versed in the principles of mechanics.
- Median:** Middle; relating to the middle; situated or placed in the middle; mesial (*which see*).
- Mediate:** (*adjective*) Indirect; not immediate.
- Mediate:** (*verb*) To bring about as an agent; effect; accomplish.

**Medicament:** A medicine; a healing application.

**Memoriter:** By heart; from memory.

**Meninges:** The coverings of the brain (and spinal cord).

**Mesial:** Middle; relating to an imaginary plane dividing the body into two equal halves.

**Meticulous:** Over-cautious; attending to minute detail.

**Metrical:** Pertaining to meter; of the nature of verse; *measured*; rhythmical.

**Metronome:** An instrument giving audible beats and used for marking exact time in music.

**Mimetic:** Imitative; involving mimicry.

**Minaret:** A tower.

**Mitigate:** To lessen; moderate; abate; make better.

**Mnemonic:** Assisting the memory.

**Mogilalia:** A difficulty of utterance.

**Monitory:** Warning.

**Monograph:** A treatise on a single subject.

**Monophthong:** A vowel consisting of only one element.

**Monosyllable:** A word consisting of a single syllable.

**Monotonic:** In a monotone; in one pitch.

**Motility:** Power of motion; ability to move.

**Motor:** Relating to motion or movement; relating to muscular movement.

**Motorial:** Same as *motor*.

**Multifarious:** Having great diversity and variety.

**Multiform:** Having many forms; diverse.

**Multiple:** Having many parts and relations; consisting of a large number; manifold.

**Multiplicity:** The condition of being manifold or numerous; a great number.

**Multitudinous:** Numerous; consisting of a multitude.

**Municipality:** Township; city.

**Musculature:** The muscular system; the muscles.

**Mutation:** Change; alteration; the process of changing.

**Mute consonant:** A surd or voiceless consonant.

**Mutism:** Dumbness.

**Myelin:** The white covering of a nerve-fibre.

**Naïve:** Not reflecting; uncritical; artless; frank; simple; sincere.

**Nares:** The cavity of the nose; the nostrils.

**Nasal:** Relating to the nose.

**Nascent:** Coming into being; beginning to exist; undeveloped.

**Natural selection:** Selection by the elimination of the unfit and the survival of the fit.

**Necropsy:** Post-mortem examination; examination of a body after death; autopsy.

**Negative:** A plate from which photographs are printed.

**Negligible:** Unimportant; that may be disregarded; not materially affecting results.

**Nephritis:** Inflammation of the kidneys.

**Neural:** Relating to the nervous system; relating to nerves.

**Neurasthenia:** An exhausted condition with disturbances of the nervous system; nervous weakness; nervous prostration.

**Neuroses:** Plural of *neurosis*.

**Neurosis:** A nervous derangement; a functional nervous disease.

**Neurotic:** Relating to neurosis; subject to neuroses; nervous.

**Nonchalant:** Indifferent; unconcerned; cool.

**Non-speculative:** Not speculative; without theory or conjecture.

**Norm:** The normal type; standard.

**Notation:** A system of signs or symbols; the symbols themselves.

**Nucha:** The nape or back part of the neck.

**Nuclei:** Plural of *nucleus*.

**Nucleus:** Kernel; centre; core.

**Nugatory:** Insignificant; trifling; vain.

- Obfuscate:** To obscure; darken; cloud; render dim.
- Objective:** Outward; external; external to the mind; directing the mind to external things without reference to personal sensations and experiences.
- Oblique:** Slanting; sloping.
- Obliterate:** To blot out; erase; efface.
- Oblivion:** The state of having passed out of memory; loss of remembrance.
- Obscurantist:** One that opposes the diffusion of knowledge.
- Obscuration:** The state of being obscured or darkened; the act of obscuring.
- Obsession:** A haunting idea; the state of being haunted by an idea.
- Obsolescent:** Becoming obsolete; going out of use.
- Obsolete:** Gone out of use; discarded; antiquated.
- Obtain:** To prevail; exist.
- Obtrude:** To thrust in or upon; to intrude.
- Obtrusion:** The act of obtruding.
- Obviate:** To encounter or meet; to clear away or provide for; to remove.
- Occlude:** To shut up; to close.
- Occlusion:** A shutting up; a closing; an occluding.
- Octave:** A sound eight tones higher or lower than another.
- Olfactory:** Relating to the sense of smell.
- Omniscient:** Knowing all things; unlimited in knowledge.
- Ontogenetic:** Relating to the development of the individual as opposed to that of the race.
- Optical:** Relating to vision or sight; relating to the eyes.
- Optic disk:** The point where the optic nerve enters the retina of the eye; the blind spot.
- Oral:** Relating to the mouth.
- Orang-outang:** One of the higher apes.
- Orchestral:** Relating to an orchestra.

**Organic:** Relating to bodily organs; physical or bodily rather than functional or mental; relating to an organism or living object.

**Organism:** A living object; an animal or plant.

**Orifice:** An opening; an opening into a cavity; an aperture.

**Orthographically:** According to the rules of spelling.

**Orthopædic:** Relating to orthopædia, the correction of deformities.

**Orthophonic:** Literally, relating to right sound or to a correct system of sound-production.

**Ostensible:** Seeming; appearing; professed; pretended.

**Outré:** Odd; peculiar; extravagant.

**Overt:** Clear; manifest.

**Oxygenation:** The act of oxygenating or causing to combine with oxygen, one of the gases of the air.

**Palatal:** Relating to the palate or roof of the mouth.

**Palatine:** Same as *palatal*.

**Palpitation:** A beating; a too rapid beating.

**Panacea:** A cure-all; a remedy for all diseases.

**Pantomime:** Dumb-show; sign language; a series of actions and gestures intended to convey ideas.

**Parabola:** A geometrical figure produced by cutting a cone with a plane parallel to one of its sides; a curved line.

**Paradox:** A thing seemingly false yet true; a puzzling fact.

**Paragon:** A model of excellence; a pattern.

**Paragram:** A play upon words; a quibble.

**Paramount:** Superior to all others; chief; supreme; most important.

**Paraphernalia:** Miscellaneous articles; a collection of objects; an equipment.

**Paraphrase:** To express in different words; change the wording of.



**Pare:** Peel.

**Parenthesis:** An explanation inserted in a sentence. The following curved lines ( ).

**Paresis:** A mild form of paralysis.

**Paretic:** Relating to paresis; partially paralyzed.

**Parity:** Equality; like state or degree; analogy; close resemblance.

**Paroxysm:** Fit; convulsion; spasm.

**Patent:** Clear; plain; manifest.

**Pathogenic:** Giving origin to disease; causing illness.

**Pathological:** Relating to disease.

**Pathologist:** One versed or skilled in pathology, the science of disease.

**Patter-song:** A comic song in which the words are uttered with extreme rapidity.

**Paucity:** Fewness; smallness in number.

**Pectoral:** Relating to the chest.

**Pemmican:** A food used by explorers.

**Percussion:** The act of striking; the shock produced by a blow.

**Perforce:** Necessarily; by all means.

**Peripheral:** External; at the surface of the body.

**Peripheric:** Same as *peripheral*.

**Periphrasis:** A roundabout expression; a circumlocution.

**Periphrases:** Plural of *periphrasis*.

**Pernicious:** Hurtful; vicious; injurious.

**Peroration:** The concluding part of an oration.

**Per se:** By itself; in and of itself.

**Perspicuity:** Clearness; plainness.

**Pertinent:** Fitting; proper; suitable; not foreign to the matter.

**Perversion:** The act of perverting, corrupting, or distorting; the state of being thus perverted; impairment; injury; distortion.

**Pfennig:** A German coin of the value of about a quarter of a cent.

A German coin of the value of about half a farthing.

**Pharynx:** The extreme back of the throat; the cavity behind the tongue.

**Phenomenon:** Happening; appearance; a fact presented to observation.

**Phobia:** An abnormal fear; a persistent dread.

**Phonation:** Vocalization; the production of vocal sound or voice.

**Phonetic:** Relating to phonetics.

**Phonetician:** One skilled or versed in phonetics.

**Phoneticist:** Same as *phonetician*.

**Phonetics:** The science of sounds, especially those of human speech.

**Phonophobia:** The fear of sound; the fear of speaking.

**Photogram:** A photographic record of a physiological experiment; a photograph.

**Phthisis:** Tuberculosis of the lungs; consumption of the lungs.

**Phylogenetic:** Relating to the evolution of the race.

**Physical:** Relating to material things as opposed to mental; relating to the body; material; bodily.

**Physiognomy:** A combination of features; appearance; countenance; face.

**Physiology:** The science of bodily functions; the study of the normal workings of the body.

**Pictorial:** Relating to pictures.

**Piecemeal:** By pieces; in fragments; by little and little in succession.

**Pigmentary:** Marked by the presence of pigment or coloring matter.

**Pitch:** The highness or lowness of a tone; the acuteness or grave-ness of a note; the relative acuteness or height of a sound.

**Piacid:** Calm; serene; unruffled; undisturbed.

**Plagiarize:** To steal the writings of another.

**Plastic:** Capable of being shaped or moulded; capable of being changed or modified.

**Plenary:** Complete; full; entire.

**Plethora:** A fulness of the blood-vessels; an overfulness of the vessels.

**Plethysmograph:** An instrument used for detecting changes in the size of an arm or leg.

**Plurality:** The state of being plural; a number more than one.

**Pneumograph:** An instrument used for recording respiratory movements.

**Polyglot:** Containing many languages; speaking many languages.

**Polysyllable:** A word of several syllables.

**Polytechnical:** Embracing or teaching many arts and sciences.

**Pomum adami:** The Adam's apple.

**Ponderous:** Heavy.

**Portray:** To picture; represent.

**Posterior:** Behind; toward the rear or back.

**Postfix:** To add to the end.

**Post-hypnotic suggestion:** A suggestion intended to take effect after the subject has passed out of the hypnotic state.

**Postulate:** Something assumed; something taken for granted.

**Potassium bromide:** A drug; a medicine.

**Potency:** Power; strength; efficacy.

**Potent:** Powerful; forceful; influential.

**Potential:** Existing in possibility; possible.

**Precedence:** The act or right of preceding; priority in rank.

**Precept:** A teaching; a maxim; a prescribed rule of conduct or action.

**Precipitates:** Dregs.

**Preclude:** To prevent; hinder; exclude; shut out.

- Predispose:** To make liable or susceptible to.
- Predominate:** To be chief in importance, quantity, or degree.
- Preëminent:** First in rank; supreme; extreme; superlative.
- Prefatory:** Introductory; relating to a preface.
- Prefix:** To fix or put before.
- Premise:** (*noun*) A position or fact laid down as the basis or ground of an argument.
- Premise:** (*verb*) To set forth or lay down beforehand; assume; stipulate.
- Preoccupation:** Absence of thought; inattention.
- Preponderant:** Outweighing; in excess.
- Preposterous:** Strikingly or utterly ridiculous or absurd; opposed to nature, reason, or common sense.
- Prerequisite:** Something necessary to the end proposed; something required for the end in view; that on which some later thing or condition depends.
- Presage:** To forebode; foreshow; foretell; predict.
- Primordial:** Existing from the beginning; original; primitive.
- Principiation:** Analysis.
- Privation:** Loss; lack; the state of being deprived.
- Prodigious:** Great; huge; extraordinary.
- Profile:** A side view of the head or face; an outline of this side view.
- Prognosis:** A prediction or forecast concerning the course of a disease.
- Projection-fibres:** Fibres that leave the cerebrum.
- Prolific:** Fruitful; productive; fertile.
- Promiscuous:** Mingled; confused; jumbled; indiscriminate; brought together without order.
- Promulgate:** To make known; announce; publish; proclaim.
- Propaganda:** The means or system employed to advance a cause.
- Propension:** Tendency; inclination; bent; proneness; proclivity.

**Propensity:** Same as *propension*.

**Prophylactic:** Preventive; defending from disease.

**Propinquity:** Nearness; closeness; proximity.

**Propitious:** Favorable; attended by favorable circumstances or prospects.

**Propound:** To offer; present; propose.

**Prospective:** Being still in the future or in expectation.

**Prostrate:** Lying helpless; lying weak and exhausted.

**Protoplasm:** The living matter of which animals and plants are largely composed and from which they are developed.

**Protract:** To lengthen; draw out; prolong.

**Protrusion:** The act of protruding or thrusting forward.

**Provincialism:** A peculiarity of speech or mode of enunciation found in the provinces or country districts.

**Proviso:** Provision; restriction; stipulation.

**Provocative:** That which provokes, excites, or causes an action or result.

**Proximate:** Nearest; direct; immediate; last.

**Proximity:** Nearness; closeness; the state of being near or next in place or time or in some other relation.

**Prudery:** An undue and sometimes insincere display of modesty and delicacy; excessive niceness.

**Pseudo:** (*in compound words*) False.

**Psychic:** Mental; psychological; relating to the mind.

**Psychical:** Same as *psychic*.

**Psychosis:** A mental disturbance or disorder.

**Purloin:** To take or carry away for oneself; take by theft; steal.

**Putative:** Supposed; reported; reputed to be.

**Quasi:** (*in compound words*) Appearing as if; as it were; in a manner; in a sense or to a certain degree.

**Questionnaire:** A list of questions.

**Racial:** Relating to a race or tribe.

**Raison d'être:** A reason for being; a reason or an excuse for existing.

**Ramification:** A branch; the act of branching.

**Rampant:** Unrestrained; unbridled; unchecked; exceeding all bounds.

**Random-spontaneous:** Spontaneous in origin and random in effect.

**Rational:** Reasonable; sensible; judicious.

**Rationale:** An explanation of reasons or principles; the reasons or principles themselves.

**Recalcitrant:** Refractory; resisting; refusing to submit.

**Recession:** The act of receding or withdrawing; a withdrawal; a flowing away.

**Recessive characteristic:** A characteristic or trait that may be latent or hidden in one generation but (under the proper conditions) active in the next.

**Recondite:** Hidden; obscure.

**Redintegrate:** Recall to memory; arouse by association.

**Refole langue:** A tongue-ram; a tongue-compressor.

**Reflex act or movement:** An act performed involuntarily in response to a stimulus.

**Refractory:** Unmanageable; unruly; unyielding; obstinate.

**Refutation:** The act or process of refuting or disproving.

**Remedial:** Relating to a remedy; intended as a remedy; acting as a remedy.

**Reminiscent:** Recalling the past; dwelling upon the past.

**Remission:** Discharge from penalty; pardon; forgiveness.

**Renal calculi:** "Kidney gravel"; a disease in which gravel-like bodies are present in the kidneys.

**Renegade:** Unfaithful; false; deserting; apostate.

**Reparation:** The act or process of repairing; restoration to health.

- Reparative:** Relating to reparation.
- Repetitive:** Involving repetition; repeating.
- Replete:** Full; abounding.
- Repudiate:** To refuse to acknowledge; to disclaim; disavow; reject.
- Requicken:** To bring to life again; revive.
- Requisite:** Necessary; required; needful; essential.
- Requisition:** Request; summons; demand; the act of requiring.
- Residential:** Relating to a residence or home; fitted for residence.
- Respiration:** Breathing; the act of inhaling and exhaling.
- Retina:** The inner coat of the eyeball, formed of an expansion of the optic nerve.
- Retract:** To draw back; withdraw.
- Retrogression:** A going backwards; degeneration.
- Reverberate:** To return; send back; echo; reflect.
- Revert:** To return; fall back; to return to or toward an original or ancestral type.
- Revoke:** Annul; cancel; repeal; recall; abolish.
- Rhetorically:** In a rhetorical or an oratorical manner; with correct composition and delivery.
- Rhythm:** Regularity of movement; measured movement; the regular recurrence of accent or impulse; the "swing" in a particular movement or execution.
- Rhythmical:** Marked by rhythm; regular in movement or accent; keeping time.
- Rhythmus:** Same as *rhythm*.
- Rima-glottidis:** The glottis; the aperture of the glottis.
- Rubrics:** Formal instructions; directions or rules.
- Rudimental:** Undeveloped; elementary; rudimentary.
- Rudimentary:** Undeveloped; not fully developed; imperfect.

- Salutary:** Helpful; wholesome; advantageous; useful.
- Sang-froid:** Coolness; indifference; freedom from emotion.
- Schematic:** Diagrammatic; relating to a scheme, diagram, or outline.
- Script:** Handwriting; print in imitation of handwriting.
- Scriptory:** Written; expressed in writing.
- Scrutinize:** To observe closely; examine carefully.
- Scrutiny:** Careful observation or examination.
- Secondary-automatic:** Performed unconsciously from habit.
- Semi-vocal:** A voiced consonant.
- Sense-organ:** An organ — such as the eye or ear, for instance — that gives sensation when stimulated.
- Sensory:** Conveying or giving rise to sensation.
- Sentient:** Feeling; capable of feeling.
- Septennial:** Lasting or continuing for seven years.
- Sepulchral:** Relating to a sepulchre or tomb; hence deep, grave, hollow in tone.
- Sequence:** Order; succession.
- Sequent:** Following; succeeding.
- Sexuelle ætiologie:** Sexual ætiology; sexual causality; the theory of sexual causes.
- Sibilant:** The act of sibilating or hissing; a hissing sound.
- Simulant:** One that simulates or mimics.
- Simulate:** To feign; imitate; counterfeit; mimic.
- Simultaneous:** Occurring at the same time.
- Sobriquet:** A nickname.
- Soft palate:** The soft part of the roof of the mouth; the posterior part of the roof of the mouth.
- Somæsthetic:** Relating to general bodily sensations; relating to "feeling."
- Somatic:** Relating to the body; bodily; corporeal.
- Somnambule:** In a hypnotic state — that state in which one is conscious, but readily obedient to the hypnotist.



**Sonant:** Voiced; accompanied by voice or vibration of the vocal cords.

**Sonority:** Sound; sonorous quality.

**Sonorous:** Clear-sounding; resonant; loud and full-sounding.

**Sovereign:** Superior in efficacy; most potent; supreme; excellent.

**Spasm:** The sudden, involuntary contraction of a muscle or muscles; a convulsion; cramp.

**Spasmodic:** In the manner of a spasm; convulsive; sudden; violent.

**Spastic:** Relating to spasm; spasmodic.

**Spatial:** Relating to space.

**Spatula:** A flat or spoon-shaped instrument used for depressing the tongue.

**Species:** A group; a sub-group. — Variety; kind; sort.

**Specific:** (*adjective*) Precise; exact; definite. — Relating to a species or sub-group.

**Specific:** (*noun*) A remedy; a medicine specially adapted to cure or prevent a particular disease.

**Specific gravity:** Density; weight with relation to volume or size.

**Spectral:** Relating to the spectrum, the band of color into which white light may be decomposed.

**Speech-mechanician:** See *mechanician*.

**Spirometer:** An instrument used for testing lung-capacity and for exercising the respiratory muscles.

**Splanchnic:** Relating to the viscera or internal organs.

**Spontaneous:** Acting without external influence; arising from internal causes.

**Sporadic:** Scattered; occurring singly; occurring here and there.

**Staccato:** Abrupt; sharply emphasized; short and sharp; distinct; detached.

**Stanza:** A number of lines or verses regularly adjusted to one another.

**Static electricity:** Electricity produced by friction or other mechanical means, and employed in charges rather than currents.

**Stenographic:** Written in shorthand.

**Stethoscope:** An instrument employed by physicians in listening to respiratory sounds; heart sounds, etc.

**Sthenic:** Giving power; stimulating; having power to inspire or animate.

**Stimulant:** That which stimulates.

**Stimulate:** Impel; incite; prompt; rouse to activity. — To increase physiological action; to produce a quick but temporary increase in vital activity.

**Stimuli:** Plural of *stimulus*.

**Stimulus:** That which stimulates or excites, especially that which stimulates a sense-organ.

**Stramonium:** A drug; a medicine.

**Strangulatory:** Marked by strangling and suffocation.

**Stress:** Emphasis; accent.

**Stultify:** To make foolish; to cause to appear absurdly inconsistent.

**Subcentre:** A centre within a centre; a small centre.

**Subcortical:** Beneath the cortex of the brain.

**Subjective:** Mental; internal; in the self; belonging to the self.

**Subjoin:** To add; attach; affix; annex.

**Subordinate:** (*adjective*) Having a lower position in a scale; inferior; secondary; minor.

**Subordinate:** (*verb*) To make subordinate.

**Subserve:** To serve; administer to.

**Subservient:** Subserving; acting as an instrument or agent; adapted to promote some end or purpose. — Obedient; subordinate.

- Subsist:** To be; exist; inhere.
- Subterfuge:** A shift; a dodge; a trick; an evasion.
- Subtle:** Subtle; fine; delicate.
- Sub-tonic:** A sonant or vocalized consonant.
- Subvert:** To overthrow; extinguish; destroy.
- Summation:** The act of forming a sum or total; accumulation.
- Supererogatory:** Superfluous; unnecessary; uncalled for.
- Superficial:** On or relating to the surface; not deep; not penetrating; shallow.
- Superfluous:** Uncalled for; unnecessary; more than sufficient.
- Supernatural:** Beyond the laws of nature; miraculous; mysterious.
- Superpose:** To lay upon or over; to make coincide.
- Supersede:** To set aside; to render unnecessary; make void.
- Superstructure:** Structure; building; edifice.
- Supervene:** To take place; happen; follow.
- Supine:** Without interest or care; negligent; indolent; indifferent.
- Supplement:** To add something to; complete by additions; provide for what is lacking in.
- Surcharge:** To overcharge; overload; overburden.
- Surd:** Without voice; without vibration of the vocal cords.
- Surdal:** Same as *surd*.
- Surrogate:** A substitute; deputy; delegate.
- Sustain:** To maintain; support; uphold; withstand.
- Syllabic:** Relating to syllables; consisting of or emphasizing syllables.
- Syllabicate:** To separate or form into syllables.
- Symmetrical:** Regular; similar in shape.
- Sympathetic:** Reflex; corresponding; relating to coördination.
- Symptomatology:** The science of the symptoms of disease.
- Synchronous:** Happening at the same time; simultaneous.

**Synonym:** A word having the same meaning as another; a substitute.

**Synoptical:** Affording a general view of a subject; of the nature of a synopsis.

**Synthesis:** The putting of two or more things together; construction; composition.

**Taboo:** To shut out; exclude; discountenance.

**Tacit:** Silent; not uttered in words; implied, but not expressed.

**Taciturn:** Silent; mute; uncommunicative.

**Tactual:** Relating to the sense of touch.

**Tallow-chandler:** One that makes or sells tallow-candles.

**Tangible:** Real; definite; clear; evident; apprehensible by the mind.

**Technique:** The mechanical and practical details of an art.

**Telepathic:** Relating to "telepathy" or "thought-transference."

**Temporal:** Relating to time.

**Tendinous:** Relating to a tendon.

**Tension:** The state of being stretched or strained; a making tense.

**Tenuity:** Thinness; rareness; rarity.

**Thaumaturgic:** Magical.

**Therapeutic:** Relating to therapeutics or the art of healing; curative; alleviative.

**Therapy:** Therapeutics; the art of curing; that part of medicine that deals with the discovery and application of remedies.

**Thermal:** Relating to heat or warmth; relating to the perception of warmth and cold.

**Thesis:** A theory; theme; proposition.

**Thorax:** The cavity of the chest.

**Thyroid cartilage:** The cartilage seen as the Adam's apple.

**Thyroid gland:** A gland in the neck.

**Tic:** An involuntary convulsive movement, especially of the muscles of the face.

**Timbre:** Tone-color; sound-quality; the inherent character of a sound (by which, for instance, a human voice is distinguished from a violin).

**Titilate:** To tickle; excite pleasurably.

**Titulary:** Relating to a title.

**Tom-tom:** A drum used in India and other Oriental countries.

**Tonic:** A vowel or diphthong.

**Tonic spasm:** A spasm in which a muscle remains in continued contraction.

**Torpid:** Sluggish; numb; dull; dormant; inert; indolent; inactive.

**Toxic:** Relating to poison; due to poison; poisonous.

**Trachea:** The windpipe.

**Transcend:** To rise above; surmount; surpass; excel; overstep.

**Transcribe:** To write in another form.

**Transcription:** The act of transcribing; anything transcribed.

**Transfix:** To pierce through, as with a pointed weapon; to impale.

**Transient:** Temporary; fleeting; brief.

**Transition:** Change; a passing from one state or condition to another.

**Transitory:** Temporary; brief; short-lived.

**Transmute:** To change; transform.

**Transposition:** A changing of relative position; a transposing.

**Transverse:** Running from one side of the body to the other; crosswise; lying across.

**Trauma:** An injury; a wound.

**Traumata:** Plural of *trauma*.

**Traumatic:** Relating to a trauma.

**Travesty:** A burlesque; a grotesque imitation; the act of making a travesty or burlesque of.

**Tremor:** An involuntary trembling; a quivering or shaking.

**Tremulous:** Trembling; quivering.

**Troglodyte:** A cave-dweller.

**Tumor:** A swelling; a morbid growth or enlargement.

**Tutelage:** Guardianship; protection; tutorship; instruction.

**Unanimous:** Being of one mind; agreeing in opinion.

**Uncomplaisant:** Discourteous; disagreeable.

**Unctuous:** Fervid; devotional; emotional; nauseously bland.

**Unembellished:** Not embellished; not adorned or decorated.

**Unequivocal:** Definite; precise; decided; without ambiguity.

**Unilateral:** Occurring on or related to one side only; one-sided.

**Uninitiated:** Not initiated; not instructed in the secrets and mysteries.

**Unison:** A joining together; a keeping together with; a keeping in time with.

**Unit character:** A character or trait that is inherited and transmitted as a unit.

**Unitary:** Single; of the nature of a unit.

**Unlocalized:** Not localized; not capable of being referred to any definite site or position.

**Unmitigated:** Not mitigated or lightened in effect; having full force.

**Unmotivated:** Without motive; not conditioned by motives.

**Uræmic:** Relating to uræmia, an abnormal condition in which the constituents of urine are present in the blood.

**Utilitarian:** Relating to utility; practical.

**Uvula:** The small, fleshy body hanging from the soft palate above the root of the tongue.

**Uvular:** Relating to the uvula; requiring the action of the uvula for articulation.

**Vacillate:** To waver; to move one way and another; to fluctuate.

**Vacuum:** An empty space; a space from which the air has been exhausted.

**Vagary:** A freak; whim; caprice.

**Validity:** The state of being valid, sound, or capable of being defended and justified.

**Vaporous:** Of the nature of vapor; cloudy; indistinct; vain; unreal.

**Variant:** A thing different only in form; a variation.

**Vascular:** Relating to vessels; relating to blood-vessels.

**Vaso-motor centre:** A nerve-centre controlling the contraction and dilatation of the blood-vessels.

**Vaudeville:** A music-hall; a music-hall entertainment.

**Vaunt:** To make a vain display of; exhibit proudly; boast or brag about.

**Velum:** The soft palate; the posterior part of the roof of the mouth.

**Ventral:** Relating to the belly; on the front of the body.

**Venture (At a venture):** At hazard; at random; without seeing the end or mark.

**Verdrängt:** Repressed.

**Vermilion:** Scarlet; brilliantly red.

**Vertical:** In an upright position; upright; plumb.

**Vesication:** The formation of blisters.

**Vestibule:** A small chamber; a space; a cavity; an opening.

**Vestigial:** Rudimentary; undeveloped; meagre.

**Vicarious:** Acting for another; substituted in the place of another; deputed; delegated.

**Vicissitude:** A change; a mutation; a passing from one state or condition to another.

**Vindicate:** To defend; justify; maintain.

**Virtuoso:** One skilled in a particular art; a master in technique; an adept.

**Visceral:** Relating to the viscera or internal organs.

**Vita sexualis:** Sexual life.

**Visualize:** To see mentally; to picture in visual imagery.

**Vocal:** Relating to the voice; having voice; involving production of voice by the vibration of the vocal cords.

**Vocal cords:** A pair of membranous folds in the larynx, which produce voice by vibrating.

**Vocalize:** To produce voice; to vibrate the vocal cords; to utter with voice and not merely with breath.

**Vociferous:** Noisy; loud; clamorous; making a loud outcry.

**Vogue:** Fashion; mode; usage; practice.

**Voluntary:** Proceeding from the will; subject to the will; spontaneous; designed; intended.

**Vulnerable:** Liable to injury; liable to attack; assailable; capable of being wounded.

**Wachmann:** Watchman; policeman.

**Wachsuggestionen:** Suggestions given in the waking state.

**Wane:** To diminish; decrease; decline; fail.





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<sup>1</sup> The majority of the works given in this bibliography deal exclusively with stammering, though there have also been included a number of works of special interest that deal with stammering only incidentally. With a few exceptions references have not been given to articles appearing in periodicals. Approximately 400 such references may be found in the "Index-catalogue of the Library of the Surgeon-general's Office" (of the United States Army), to which source of information the reader interested in the matter is referred. For information concerning recently published articles in the principal American and foreign medical journals the reader is referred to the "Guide to Current Medical Literature," which is issued twice yearly by the American Medical Association, Chicago.

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## INDEX<sup>1</sup>

- Abdominal breathing, II. 15  
 Abdominal muscles, contracting the  
     during speech, II. 25  
 "Abnormal reflexes," II. 239  
 Absolute musical memory, I. 100  
 Abstract thought, I. 21  
 Accent-marks with poetry, II. 169  
 Accents, word-exercises with vari-  
     ously placed, II. 100, 110  
 Accentuation of different words in a  
     sentence, II. 109  
 Achoppement syllabique, I. 58  
 Acquired kinæsthetic stammering,  
     defined, I. 258  
 Actors, etc., as stammerers, I. 318  
 Adams, Samuel Hopkins, II. 303  
 Adenoids, II. 223  
 Affection, defined, I. 17  
 Affective memory, I. 321  
 Afferent nerves and fibres, I. 65  
 Agoraphobia, II. 298  
 Agraphia, I. 113  
 Agreements with "specialists," II.  
     287 [See also *application blanks*.]  
 Alexia, I. 113  
     musical, I. 155  
 Alliterations, practising, I. 345  
 Alliterative sentences  
     for practice of forceful articulation,  
     II. 133  
     for syllabic speaking, II. 156  
 Alphabet, physiological, I. 292  
 American system, a representative,  
     II. 259
- Amnesia  
     auditory, as the primary cause of  
         stammering, I. 187  
     defined, I. 106  
     musical, I. 36, 152, 202  
     verbal, defined, I. 20  
     visual, I. 108  
     visual verbal, I. 113  
 Amnesia verbalis, defined, I. 20  
 Amusia, I. 151  
     case of Emil Scaria, I. 201  
 Anæmia, cerebral, I. 226  
 Analysis of consonants, II. 86  
     commentary on, II. 89  
 Analysis of vowels, II. 91  
     commentary on, II. 93  
 Anatomy of the speech-organs, II.  
     85, 90  
 Anecdotes, relating, II. 109, 110  
 Angular gyrus, injury to the, I. 113  
 Aphasia, I. Ch. VI.  
     and ability to read aloud, I. 170  
     and ability to repeat, I. 166  
     and ability to sing, I. 156  
     and interjectional speech, I. 174  
     and stammering, resemblance be-  
         tween, I. 207, 226  
     articulatory kinæsthetic, I. 122  
     associational, I. 147  
     auditory, I. 136  
     case of bearing resemblance to  
         stammering, I. 213  
     case of the author, I. 130  
     caused by emotion, I. 163

<sup>1</sup> When a subject covers several pages reference is made only to the page on which the subject begins.



- Aphasia, I. Ch. VI.**  
 causes of, I. 179  
 defined, I. 107  
 expression of oral speech in, I. 145  
 interpretation of speech in, I. 143  
 motor, I. 122  
 optic, I. 148  
 relation between auditory and motor, I. 143  
 retention of verbal imagery in, I. 144  
 transitory, I. 161
- Aphemia, I. 118**  
 stammering not a form of, I. 228
- Apoplexy, cerebral, I. 226**
- Appliances**  
 Bates', II. 218  
 mechanical, II. Ch. VI.
- Application blanks, II. 271**
- Apraxia, I. 146**  
 Arms, movements of the to prevent stammering, II. 178
- Arnott's expedient, II. 54**
- Articulation, II. Ch. IV.**  
 as the seat of the stammerer's difficulty, II. 57  
 expedients relative to various modes of, II. 81  
 forceful, II. 132, 136  
 light, II. 111, 126
- Articulation-exercises, II. 68, 80**  
 charts for, II. 77  
 for developing the speech-organs, II. 59, 67
- Articulatory-kinæsthetic aphasia, I. 122**
- Articulo-moteur, the, I. 42, 52, 103**
- Asking and answering questions, II. 107, 110**
- Aspirate prefix, II. 55**
- Association**  
 as a cause of stammering, I. 272  
 controlled, II. 247  
 emotional, I. 320  
 free, II. 247  
 nature of, I. 9
- Association fibres, I. 65**  
 injury to the, I. 147
- Associational aphasia, I. 147**  
 stammering not a form of, I. 231
- Assumption of function by the uninjured hemisphere in aphasia, I. 176**
- Atavisms, I. 299**
- Atrophy, cerebral, I. 68**
- Attention, "division" of, II. 177**
- Audile, the, I. 27**
- Audito-moteur, the, I. 42, 52, 100, 103**
- Auditory amnesia as the primary cause of stammering, I. 187**
- Auditory and motor aphasia, relation between, I. 143**
- Auditory aphasia, I. 136**
- Auditory imagery, I. 5**  
 influence of sounds on, I. 347  
 possibility of goading the into activity, I. 346  
 probably deficient in the stammerer, I. 248  
 strengthening the, I. 354, 359  
 vulnerability of, I. 231
- Auditory motor verbal imagery, I. 52**
- Auditory verbal centre, injury to the, I. 136**
- Auditory verbal imagery, I. 45**
- Aurelianus and rhythm, II. 173**
- Austrian system, a representative, II. 264**
- Automatic acts, I. 92**
- Automatisms, II. 183**
- Auto-suggestion, I. Ch. IX.**  
 as a major system, II. 230  
 counter, I. 339; II. 232  
 counteracting, I. 338  
 direct effects of, I. 314
- Balls, gutta-percha, II. 216**
- Bastian, I. 34**
- Bates' appliances, II. 218**

- Baton**,  
 use of while speaking, II. 174  
 use of with breathing-exercises, II. 14  
 use of with vocal exercises, II. 48
- Battery, electric**, II. 216
- Beating time**, II. 164, 173
- Belgian system**, a representative, II. 261
- Bewilderment in stammering**, I.  
 Ch. VIII. [See also *confusion*,  
*multiple thought*, etc.]
- Bizarries**, II. 228
- Blind**, concepts of the, I. 23, 25, 80
- Blindfold chess-playing**, I. 28
- Blood-supply to the brain**, I. 221, 310
- Books by literary ghosts**, II. 285
- Brain, the**, I. Ch. IV.  
 blood-supply to during emotion,  
 etc., I. 221, 310  
 convolutions of, I. 62  
 fibres of, I. 62  
 fissures of, I. 61  
 lobes of, I. 52
- Brain-centres**, I. 67  
 impairment of, I. Ch. VI.  
 lowered excitability of, I. 163
- Breath**  
 economizing the II. 23  
 forceful expiration of the, II. 23  
 holding the in respiratory exercises, II. 20
- Breathing** [See also *respiration*, *inhalation*, etc.]  
 diaphragmatic, II. 25  
 expedients relative to various modes of, II. 21  
 through the mouth, II. 26  
 through the nose, II. 26
- Breathing-exercises**, II. 6  
 commentary on, II. 19
- Breathing-muscles**, exercises for the,  
 II. 14, 20
- Bridgman, Laura**, I. 25
- Broca's convolution**, I. 74  
 injury to, I. 122
- Broster**, II. 185
- Broster method** [See *Leigh method*.]
- Cælius Aurelianus** and rhythm, II. 173
- Canadian system**, a representative,  
 II. 259
- Catalepsy, mental**, I. 309
- Cause of stammering**  
 inducing, I. 308  
 Denhardt's theory, I. 302  
 failure of voice theory, I. 181, 302,  
 II. 29  
 primary, I. 187
- Causes of aphasia**, I. 179
- Cerebellum**, I. 61
- Cerebral anemia**, I. 226
- Cerebral apoplexy**, I. 226
- Cerebral congestion**, I. 225, 310
- Cerebral hyperæmia**, I. 225, 311
- Cerebral localization**, I. 67
- Cerebrum**, I. 61
- Charcot**, I. 76
- Charlatans**, II. 303
- Charts** [See *respiration-charts*, *inflexion-charts*, etc.]
- Chess-playing, blindfold**, I. 28
- Childhood**  
 appearance of stammering in, I.  
 274, 304  
 the most favorable period for treating stammering, I. 364
- Children**  
 • stammering-schools for, II. 305  
 treating stammering in, II. 305
- Chromæsthesia**, I. 38, 351
- Chromatic scale**, II. 34
- Clavicular breathing**, II. 14
- Clenching the fists**, II. 215
- Click of the glottis**, II. 34
- Closed jaws, reading with**, II. 60, 68
- Cluttering**, I. 287, 289
- Coffee**, II. 228
- Cognition, defined**, I. 17
- Coil, electric**, II. 216

- Collar-bone breathing, II. 14
- Colombat's  
   method, II. 161, 173  
   modification of the Leigh method,  
     II. 189  
   refoule langue, II. 222
- Color in verbal imagery, I. 351
- Color-audition, I. 38
- Color-blindness, I. 210
- Combinations, difficult, II. 104
- Competitions, II. 296
- Completing sentences, II. 107, 110
- Concept, the, I. 16
- Conception, I. 16, 76
- Concert, stammerer's fluency when  
   speaking in, I. 200
- Confusion in stammering, I. Ch.  
   VIII. [See also *bewilderment*,  
     *multiple thought*, etc.]
- Congestion, cerebral, I. 225, 310
- Conservation of energy, law of, I. 93
- Consonants  
   classification of, II. 89  
   detached from body of word, II.  
     151  
   forcible articulation of, II. 132, 136  
   initial, retained in synonyms, I.  
     196  
   not the seat of the stammerer's  
     difficulty, I. 183  
   omitted or reduced, II. 111, 126  
   physiological production of, II.  
     86  
   separated by an "inaudible" *h*, II.  
     153  
   stammering on continuous and  
     explosive, I. 261  
   taking care of the, etc., II. 136
- Constructive imagination, I. 9
- Contests, name-gathering, II. 296
- Continuity of voice, II. 53
- Continuous consonants "attacked"  
   by opening the mouth, II. 141
- Contracts with "specialists," II. 287  
   [See also *application blanks*.]
- Controlled association, II. 247
- "Conversion," hysterical, II. 238
- Convolutions of the brain, I. 62
- "Copyrighted methods," II. 302
- Cork between the teeth, II. 217
- Corollaries, I. Ch. X.
- Corpus callosum, I. 66
- Correspondence schools, II. 255
- Cortex, defined, I. 61
- Costal breathing, II. 14
- Counter auto-suggestion, I. 339, II.  
   232
- Counting, II. 106, 110
- Coup de la glotte, II. 31
- Courses for stammering children,  
   municipal, I. 365
- Crossing of fibres, I. 66
- Cuneus, injury to the, I. 112
- Cures, percentage of, II. 265
- Cures, temporary, II. 266
- Danish system, a representative, II.  
   262
- "Darkening the mental eye," II. 227
- Deaf, the orally taught  
   no stammering among, I. 234  
   speech of, I. 103, 140
- Deaf-blind, concepts of, I. 23, 25, 81
- Deaf-mutes, I. 10, 23, 46, 95
- Declaiming in a loud voice, II. 39, 50
- Decussation of fibres, I. 66
- Defining words as an exercise, II. 108
- Demosthenes, II. 24, 216
- Denhardt's theory of the cause of  
   stammering, I. 292
- Dextrality, I. 71
- Diabetes and emotion, I. 330
- Diacritics, II. 142
- Diagnoses by "specialists," II. 293
- Dialogue-reading, II. 103, 110
- Diaphragm, the,  
   exercises for, II. 15  
   Findley's theory of the action of,  
     II. 179
- Diaphragmatic breathing, II. 15, 25

- Difficult combinations, II. 104, 110  
 Difficulties, artificial, presented to the pupil, II. 109, 111  
 Diplomas, medals, etc., II. 279  
 Direct attack, II. 31, 49, 56  
 "Discoveries" offered to stammerers, II. 300  
 Disease, effect of on the emotions, I. 330  
 Distortion of verbal imagery, I. 269  
   correcting, I. 342  
 Distortion of the vowels in stammering, I. 190  
 Dividing pauses, eliminating, II. 148  
 Division of attention, II. 177  
 Dorsal breathing, II. 15  
 Double articulations, II. 104  
 Drawing, II. 52  
 Dreams  
   as fulfillments of repressed wishes, II. 244, 249  
   imagery of, I. 37  
 Drugs, effect of on the emotions, I. 329  
 Dumb-bells  
   with breathing exercises, II. 17, 20  
   with syllabic speaking, II. 158  
   with vocal exercises, II. 43, 50  
 Dynamogenesis, law of, I. 18, 89  
 Dyspepsia and emotion, I. 332
- Ear-mindedness, I. Ch. II.  
 Echolalia, I. 167  
 Eclectic methods, II. 144  
 Economizing breath, II. 23  
 Efferent nerves and fibres, I. 65  
 Effort, suppression of physical, II. 204  
 Electric battery, II. 216  
 Electric coil, II. 216  
 Electrical treatments (galvanic, faradic, and static), II. 222  
 Embololalia, II. 215  
 Embolophrasia, II. 215
- Emotion [See also *fear*.]  
   and cerebral blood-supply, I. 221, 310  
   and diabetes, I. 330  
   and disease, I. 330  
   and drugs, I. 329  
   and dyspepsia, I. 332  
   and phthisis, I. 330  
   as a cause of aphasia, I. 163  
   influence of the thyroid gland on, I. 330  
   influenced by the physical condition, I. 337  
   instinctive, I. 322  
   James-Lange theory of, I. 324  
   nature of, I. 324  
   sthenic, II. 232  
 Emotional association, I. 320  
 Empty lung, speaking on, II. 22  
 "End-tongue wording," II. 198  
 English system, a representative, II. 258  
 Enthusiasm, imbuing the pupil with, II. 228  
 Environal stammerers, II. 233  
 Ê-prefix, II. 54  
 Erythrophobia, I. 297  
 Exacerbation of physical stammering, I. 266  
 Exercises [See *breathing-exercises*, *vocal exercises*, *articulation-exercises*, etc.]  
 Expiration, forceful, II. 23  
 Explosive consonants "attacked" by light articulation, II. 141  
 Expression of oral speech in aphasia, I. 145  
 Ex-pupils' leagues, II. 276  
 External suggestion, I. 314  
 Eye-mindedness, I. Ch. II.
- Failure of voice, causes ascribed for, II. 30  
 Failure of voice theory, I. 181, 292, II. 29

- Familiar phrases, utterance of in aphasia, I. 141
- Faradic electrical treatments, II. 222
- Fatigue, II. 228
- Fear, I. Ch. IX. [See also *emotion*.]  
cerebral blood-supply during, I. 223  
counteracting, I. 335  
direct effects of, I. 309  
nature of, I. 324
- Fear-neurosis, stammering as a, I. 292, II. 235
- Feeling-element in speech, I. 59
- Fees  
for courses, II. 294  
refundment of, II. 273
- Fehlhandlungen, II. 246
- Female stammerers, I. 211
- Fevers, I. 274
- Fiat, the, I. 94
- Fibres  
association, I. 65  
of the brain, I. 62
- Findley's, Dr.  
attempt at cure, II. 268  
use of gesture, II. 179
- Fissures of the cerebrum, I. 61
- "Following the instructions," II. 271
- Forceful articulation, II. 132, 136
- Forceful expiration, II. 23
- "Foreign ideas," excluding, II. 227
- Foreign languages, mastering, I. 99
- Framing sentences, II. 226
- "Fraud, the Great American," II. 303
- Free action of jaw, II. 139, 140
- Free association, II. 247
- French system, a representative, II. 260
- Full breathing, II. 15
- Fumbling buttons, etc. II. 183
- Gallaudet, Dr. I. 234
- Galton, I. 29
- Galvanic electrical treatments, II. 222
- Genius, I. 12
- Geniuses among stammerers, I. 278
- German pamphlet, method of, II. 128
- German system, a representative, II. 261
- Gesture  
as a remedy for stammering, II. 177  
to control action of diaphragm, II. 179
- Ghosts, literary, II. 285
- Glide of the glottis, II. 32
- Glossio-mochlion, Wutzer's, II. 222
- Glottis-stroke, II. 31
- Goitre, I. 330
- Graves, Dr., II. 179
- Graves' disease, I. 331
- "Great American Fraud, the," II. 303
- Grunt, initial, II. 214
- "Guarantees" to cure stammering, II. 269
- Gustatory images, I. 7
- Gutta-percha balls, II. 216
- Gymnastic exercises, II. 222
- "Gymnastics, mental," II. 229
- H* ("inaudible") after initial consonants, II. 153
- Hagemann, Frau, II. 187
- Hagemann method [See *Leigh method*.]
- Hallucination, I. 5, 79
- Head, throwing back the, II. 56
- Helen Keller, I. 48, 94
- Hemianopsia, I. 74, 112
- Hemiplegia, I. 119, 122
- Heredity and stammering, I. 256
- High position of tongue, II. 183
- Holding the breath in respiratory exercises, II. 9, 20
- Home treatment [See *correspondence schools*.]
- Homonymous hemianopsia, I. 74, 112

- Homonyms and stammering, I. 315  
*H*-prefix, II. 55  
 Hyperemia, cerebral, I. 225, 311  
 Hypnotism, I. 338, II. 232  
 "Hysterical conversion," II. 238  
 "Hysterical symptoms," II. 240
- Idea, the, I. 9  
 Ignorance of "specialists," II. 285  
 Illusions, I. 16, 78  
 Imagery [See also *auditory imagery*,  
*verbal imagery*, etc.]  
     and voluntary speech, relation  
         between, I. 86  
     comprehending fugitive, I. 255  
     correcting distortion of, I. 342  
     differences in, in the sexes, I. 36,  
         211  
     in men of science, I. 36  
     individual differences in, I. Ch. II.  
     intensifying the, I. 177, 354  
     nature of, I. 3  
     obscured by physical stammer-  
         ing, I. 264  
     of dreams, I. 37  
     relation of to sense-perception, I.  
         37  
     variability of in the same person,  
         I. 253  
 Images  
     and muscular movements, I. 86  
     as speech-cues, I. 94  
 Imitating voices, etc., II. 101  
 Imitation as a cause of stammering,  
     I. 271  
 Impairment of brain-centres, I.  
     Ch. VI.  
 Impingements from a lower plane,  
     II. 229  
 "Inaudible" *h* after initial conso-  
     nants, II. 153  
 Incoördinations, II. 246  
 Indifferent, the, I. 27  
 Indirect attack, II. 32, 49, 55  
 Infectious fevers, I. 274
- Inflection  
     as a cause of stammering, II. 52  
     as a remedy for stammering, II. 53  
 Inflection-chart, II. 38  
 Inflection-exercises, II. 36, 49  
 Inhalation, initial, II. 21  
 Inhaling before difficult words, II.  
     22  
 Inhibition of thought, etc., I. 284,  
     316, 317  
 Initial consonant  
     detached from body of word, II.  
         151  
     omitted or reduced, II. 111, 126  
     separated by an "inaudible" *h*, II.  
         153  
     subjoined to word preceding, II.  
         145  
 Initial *z*, II. 54  
 Initial inhalation, II. 21  
 Initial vowels, prolonging, II. 122,  
     128  
 Injury to the brain-centres, I. Ch. VI.  
 Innervation, I. 86  
 Instinctive emotions, I. 322  
 "Instructions, following the," II.  
     271  
 Intellectual activity and cerebral  
     blood-supply, I. 221  
 Intelligence of the average stam-  
     merer, I. 276  
 Intensifying the mental imagery, I.  
     354  
 Intensifying vowels, II. 124, 128  
 Interjectional speech  
     in aphasic patient, I. 174  
     in stammerers, I. 213  
 Internal speech, practice of, II. 226  
 Interpretation of speech in aphasia,  
     I. 143  
 Interrupting pupils, II. 109, 111  
 Irritability, property of, I. 18  
 Ischæmia, I. 226  
 Isochrone, II. 171  
 Itard's tongue-fork, II. 222

- James-Lange theory of emotion, I. 324
- Jargon-aphasia, I. 52, 145
- Jaw  
     exercises for the, II. 61, 67  
     free action of the, II. 139, 140
- Jaws, reading with closed, II. 60, 68
- Johnson, Dr. Samuel, I. 120
- Judgment, I. 17
- Katenkamp Institute, II. 174
- Keller, Helen, I. 48, 94
- Kinæsthetic and visual training the desideratum in treating stammering, I. 362
- Kinæsthetic image, the, I. 7
- Kinæsthetic verbal centre, injury to the, I. 122
- Kinæsthetic verbal imagery, I. 46
- Klaustrophobia, I. 298
- Klithrophobia, I. 298
- Labial exercises, II. 59, 67
- Lalling, I. 181
- Lalophobia, I. 291, 320
- Lange's theory of emotion, I. 324
- Language, defined, I. 40
- Larynx  
     exercises for the, II. 31, 34, 49  
     squeezing the, II. 215
- Lateral breathing, II. 14
- Laura Bridgman, I. 25
- Lay, Wilfred, I. 32
- Leagues, ex-pupils', II. 276
- Leigh method, II. 183
- Leigh method current, II. 192
- Leigh, Mrs., II. 184
- Light articulation, II. 111, 126
- Ling's Swedish exercises, II. 222
- Lingual exercises, II. 61, 68, 197
- Lips  
     free action of, II. 137, 140  
     kept closed, II. 138, 140  
     kept separated, II. 138, 140
- vertical movement of, II. 138, 140  
     and tongue, watching during speech, II. 137, 140
- Lip-exercises, II. 59, 67
- Lip-reading, I. 41
- Listening, sympathetic movements while, I. 54
- Literary ghosts, II. 285
- Lobes of the cerebrum, I. 62
- Localization, cerebral, I. 67
- "Long count, the," II. 106
- "Low tongue" in stammerers, II. 186
- Lower plane, impingements from a, II. 229
- Lowered excitability of brain-centres, I. 163
- Low-pitched voice, speaking in a, II. 50
- Loud voice, speaking in a, II. 228
- Malebouche, II. 186
- Malebouche modification of the Leigh method, II. 188
- Males  
     aphasia commoner in, I. 210  
     greater variability of, I. 210  
     stammering commoner in, I. 210
- Marching  
     with syllabic speaking, II. 158  
     with vocal exercises, II. 43, 50
- Mechanical appliances, etc., II. Ch. VI.
- Medals, diplomas, etc., II. 279
- Medical societies, etc., papers before, II. 284
- Memory, affective, I. 321
- Memory-centres, I. 71
- Memory-image, I. 4
- Men of science, imagery in, I. 36
- Mental confusion in stammering, I. Ch. VIII.
- "Mental eye, darkening the," II. 227

- "Mental gymnastics," II. 229  
 Mental images, I. 3 [See also *images, imagery, auditory imagery*, etc.]  
 Mental types, I. Ch. II.  
 "Method of attack," II. 140  
 Methods, secrecy concerning, II. 299  
 Metric speech, II. 161, 173  
 Metronome  
     carrying a, II. 170, 173  
     Colombat's, II. 165  
     for reading, II. 169  
     in America, II. 171  
     in England, II. 171  
     with breathing-exercises, II. 14  
     with vocal exercises, II. 48  
 Mimetic performances, I. 101  
 Mind, the subconscious, II. 232  
 "Mind reading," I. 88  
 Mind-blindness, defined, I. 107  
 Mind-deafness, defined, I. 107  
 Mirror-practice, II. 94  
 Mispronunciation of vowels in stammering, I. 190  
 Mnemonic devices, I. 38  
 Modes of enunciation, II. Ch. V.  
 Monotone, speaking in a, II. 52  
 Moon, phases of and stammering, I. 302  
 Mosso, I. 221  
 Moteur, the, I. 27  
 Motile, the, I. 27  
 Motor aphasia, I. 122  
     and auditory aphasia, relation between, I. 143  
     stammering not a form of, I. 230  
 Motor circle, I. 267  
 Motor current insentient, I. 90  
 Motor image, the, I. 7  
 Motor nerves and fibres, I. 65  
 Motor speech-centre, injury to the, I. 118  
 Mouth, breathing through the, II. 26  
 Movements  
     cause of, I. 86  
     random-spontaneous, I. 89  
     slow and unforced, II. 209  
 M-prefix, etc., I. 349, II. 55  
 Multiple thought, I. 281 [See also *bewilderment, confusion*, etc.]  
     repressing, I. 340  
 Municipalities and courses for stammering children, I. 365  
 Muscles [See *breathing-muscles*, etc.]  
 Muscle-reading, I. 88  
 Musical alexia, I. 155  
 Musical amnesia, I. 36, 152, 202  
 Musical ear  
     lack of, I. 202  
     probably deficient in the stammerer, I. 249  
 Musical expression, I. 152, 232  
 Musical memory, absolute, I. 100  
 Musical memory-centre, injury to the, I. 151  
 Musical recognition, I. 152, 232  
 Muthonome  
     as isochrone, II. 171  
     Colombat's, II. 165  
 Mutism  
     in aphasia, I. 119  
     in stammering, I. 209  
 Myelin sheaths, I. 69  
 Name-gathering contests, II. 296  
 Negative image, the, I. 4  
 Neuroglia, I. 65  
 Neurone, the, I. 65  
 Nose, breathing through the, II. 26  
 Note-blindness, I. 152  
 N-prefix, II. 55  
 Number-forms, I. 38, 113  
 Object-blindness, I. 108  
 Obscurantists, "speech specialists"  
     as, II. 287  
 Obsession, stammering as an, II. 235  
 Obsessions, I. 297



- Octaves, practising the vowels in, II.  
34, 49
- Olfactory images, I. 7
- Onomatopoeia, I. 22
- Open position, starting from the, II.  
139, 140
- Open-mouth test, Stricker's, I. 57
- Operating craze, II. 223
- Operations, surgical, II. 223
- "Opposing movements," II. 178
- Optic aphasia, I. 148
- Optic nerves, I. 66
- Orang-outang, the, I. 69
- Orthopedic therapeutic speech-ap-  
paratus, II. 216
- Orthophonic system of Colombat, II.  
171
- Papers before medical societies, etc.,  
II. 284
- Paragraphia, I. 114
- Paraphasia, I. 137, 145
- Paraphrasing as an exercise, II. 107,  
110
- Paroxysms of stammering, I. 263
- Passive stammering, I. 209, 344
- "Patented methods," II. 302
- Percentage of cures, II. 265
- Percept, the, I. 14
- Perception, I. 14, 76
- Performing animals, I. 11
- "Phlegmatics," II. 227
- Phobias, I. 297
- Phonetic syllabication, II. 148
- Phonetics, study of, II. 82
- Phonophobia, I. 291
- Phthisis and emotion, I. 330
- Physical condition, influence of on  
the emotions, I. 337
- Physical defects of speech-organs  
absent in stammerers, I. 206
- Physical stammering  
counteracting, I. 343  
defined, I. 258  
discussed, I. 263
- may obfuscate verbal imagery, I.  
264  
self-exacerbation of, I. 266
- Physiological alphabet, I. 292
- Physiological consonants, practice  
of, II. 115, 127
- Physiological defect, stammering  
commonly regarded as a, II. 3
- Physiological production of con-  
sonants, II. 86
- Physiological production of vowels,  
II. 91
- Physiological spelling, II. 98, 110
- Physiology of speech  
outlined, II. 85  
study of, II. 82
- Pictures of classes, II. 293
- Pitch  
practising vowels with varying, II.  
34, 49  
precedes vowel-coloration, I. 232
- Pitman's classification of vowels,  
I. 193
- Plethysmograph, I. 222
- Pneumographic records, I. 313
- "Positive attitude," assuming a, II.  
228
- Primary image, the, I. 4
- Primary visual centre, injury to the,  
I. 112
- Principals of stammering schools  
suffering relapse, I. 361, II. 267
- Productive imagination, I. 9
- Prolonging initial vowels, II. 122,  
128
- Prolonging vowels, II. 116, 127
- Proust-Lichtheim test, I. 119
- Pseudo-hallucination, I. 5
- Pseudo-spasms, I. 266
- Psychic traumata, II. 240
- Psychoanalysis, II. 235
- Psychological methods, I. 339, II.  
Ch. VII.
- Psychology, defined, I. 1
- Psychosis, stammering as a, I. 292

- Pure stammering  
 defined, I. 257  
 possibilities of correcting, I. 346  
 subdivisions of, I. 258
- Q as *kw*, II. 81
- Quacks, II. 303
- Question-blank, II. 293
- Questionnaire, I. 239  
 author's answers to, I. 243
- Questions, asking and answering, II.  
 107, 110
- Quiet voice, beginning sentence in a,  
 II. 51
- R as *er*, II. 81
- Random-spontaneous movements, I.  
 89
- Range of the voice, using the full, II.  
 53
- Rapid utterance to exclude "foreign  
 ideas," II. 227
- Reaction-word, II. 247
- Reading aloud  
 in aphasic patients, I. 170  
 in stammerers, I. 212, 284
- Reading-exercises, II. 102, 110  
 advanced, II. 104
- Reasoning, I. 17
- Reciting  
 as an exercise, II. 107, 110  
 in stammerers, II. 284
- Recurring utterances, I. 145
- Reflex acts, I. 92
- "Reflexes, abnormal," II. 239
- Refoule langue, Colombat's, II. 222
- Refundment of fees, II. 273
- Relapse  
 usual, II. 267  
 principals of stammering-schools  
 suffering, II. 267
- Relation between motor and audi-  
 tory aphasia, I. 143
- Relaxation, II. 204  
 Dr. L. Sandow's system of, II. 206
- Relaxation-exercises, II. 205
- Remote image, defined, I. 87
- Repeating  
 in aphasic patients, I. 166  
 in stammerers, I. 196
- "Repression," II. 236
- Reproductive imagination, I. 9
- Resident image, defined, I. 86
- Respiration [See also *breathing, in-  
 halation*, etc.]  
 expedients relative to, II. 21  
 stammering and faulty, II. 4
- Respiration-charts, II. 12, 13
- Respiratory disturbances in stam-  
 mering, I. 313
- Respiratory exercises, II. 6
- Respiratory muscles  
 exercises for the, II. 14, 20  
 strengthening the, II. 6
- Retention of the verbal images in  
 aphasia, I. 144
- Retinæ, the, I. 66
- Rhythm, I. 345, II. 161, 173  
 employed by Cælius Aurelianus,  
 II. 173  
 employed by Thelwall, II. 172
- Rhythmic speaking, II. 161
- Rhythmical bodily movements, ha-  
 bituation to, II. 175
- Rhythmus, II. 172
- Rib-breathing, II. 14
- Right-handedness, I. 71
- Running words together, II. 145
- Russian system, a representative, II.  
 263
- Sandow, Dr. L., II. 206
- Satyrus, II. 24
- Secondary image, the, I. 4
- Secondary-automatic acts, I. 92
- Secrecy concerning methods, II. 299
- "Selected paragraphs," II. 103
- Sensation, defined, I. 2
- "Sense-bearers," emphasizing the,  
 II. 214

- Senses, the, I. 2  
 Sensory nerves and fibres, I. 65  
 Sentences  
     completing, II. 107, 110  
     framing, II. 226  
 Sexes, differences of imagery in the, I. 211  
 "Sexual traumata," II. 241, 253  
 Shock of the glottis, II. 56  
 Short vowels and stammering, I. 193  
 Shoulder breathing, II. 14  
 Shouting, II. 39, 50  
 Side breathing, II. 14  
 "Side-tongue wording," II. 198  
 Silence period, the, II. 225  
 Simple life, the, II. 228  
 Singing  
     in aphasic patients, I. 156  
     in stammerers, I. 184, 202  
 Situations-stotterer, II. 233  
 Slow speaking, II. 121  
 Soft palate, exercises for the, II. 66, 67  
 Solitude, stammerer's fluency in, I. 217, 220  
 "Soul-training," II. 229  
 Sound, producing consciously (German method), II. 128  
 Sounds, influence of on auditory imagery, I. 347  
 "Spasms," I. 263  
 "Specialists," ignorance of, II. 285  
 Speech  
     internal, practice of, II. 226  
     physiology of outlined, II. 85  
 "Speech specialists," II. Ch. VIII.  
     "world's greatest," II. 302  
 Speech-centres, I. 72  
 Speech-cues, I. 94  
 Speech-doubters, I. 291  
 Speeches, making, II. 109, 110  
 Speech-exercises, II. 106  
 Speech-organs normal in the stammerer, I. 206  
 Spirometer, II. 17, 20  
 Squeezing the larynx, II. 215  
 Stammen, I. 181  
 Stammerers, environal, II. 233  
 Stammering [See also *pure stammering*, *physical stammering*, *bewilderment*, etc.]  
     absent in the orally taught deaf, I. 234  
     acquired kinæsthetic, defined, I. 258  
     and ability to read with fluency, I. 212, 284  
     and ability to repeat, I. 196  
     and ability to sing, I. 184, 202  
     and ability to speak in unison with others, I. 200  
     and ability to speak when alone, I. 220  
     and aphasia, resemblance between, I. 207, 226  
     and defective articulation, II. 57  
     and distortion of verbal imagery, I. 269  
     and distortion of vowels, I. 190  
     and failure of voice, I. 292, II. 29  
     and heredity, I. 256  
     and interjectional speech, I. 213  
     and mutism, I. 209  
     and respiratory disturbances, I. 313, II. 4  
     and singing, I. 184  
     and vowel-coloration, I. 187  
     and whispering, I. 185  
     and word-deafness, I. 235  
     appearance of in childhood, I. 274, 304  
     as a fear-neurosis, I. 292  
     as a psychosis, I. 292  
     case of aphasia resembling, I. 213  
     caused by association, I. 272  
     caused by auditory amnesia, I. 187  
     caused by imitation, I. 271  
     commonly regarded as a physiological defect, II. 3

- defined, I. 181  
 Denhardt's theory of the cause of, I. 292  
 difficulty is with vowels in, I. 183  
 failure of voice theory in, I. 181  
 geniuses afflicted with, I. 278  
 intelligence normal in cases of, I. 276  
 more frequent on short vowels, I. 193  
 must be attacked during childhood, I. 364  
 not a form of aphemia, I. 228  
 not a form of associational aphasia, I. 231  
 not a form of motor aphasia, I. 230  
 on explosive consonants, I. 261  
 only on particular vowels, I. 192  
 passive, I. 209  
 physical, defined, I. 258  
 physical, discussed, I. 263  
 primary cause of, I. 187  
 probably accompanied by deficient auditory imagery, I. 248  
 pure, defined, I. 257  
 pure, subdivisions of, I. 258  
 transitory, I. 208  
 Stammering-schools, II. Ch. VIII.  
   for children, II. 305  
 "Starters," II. 215  
 Static electrical treatments, II. 222  
 Sthenic emotions, II. 232  
 Stimuli, summation of, I. 170, 172  
 Stimulus-word, II. 247  
 Stranger-practice, II. 109, 111  
 Strengthening the mental imagery, I. 354  
 Stricker's "open mouth test," I. 57  
 Stuttering, defined, I. 181  
 Subconscious mind, the, II. 232  
 Subjoining initial consonants to words preceding, II. 145  
 Suggestion, external, I. 314  
 Suggestions given in the waking state, II. 235  
 Summation of stimuli, I. 170, 172  
 Surgical operations, II. 223  
 Surrogates, II. 242  
 Swedish exercise, Ling's, II. 222  
 Syllabic speaking, II. 154  
   alliterative exercises for, II. 156  
 Syllabication, phonetic, II. 148  
 Sympathetic movements while listening, I. 54  
 "Symptoms, hysterical," II. 240  
 Synesthesia, I. 38  
 Synonyms  
   bewilderment due to use of, I. Ch. VIII.  
   retention of initial consonant in, I. 196  
   use of recommended, II. 214  
 Tactile, the, I. 27  
 Tactual images, I. 6  
 "Take care of the consonants," etc., II. 136  
 "Take care of the vowels," etc., II. 137  
 Temporary aphasia, I. 161  
 Temporary cures, II. 266  
 Temporary stammering, I. 208  
 Testimonials, II. 277  
 Thelwall, II. 172  
 Thermal images, I. 6  
 Thought  
   inhibition of, I. 284  
   multiple, I. 281  
   nature of, I. 18  
   too rapid production of verbal, I. 286  
 Throat-contraction, II. 30  
 Throwing back the head, II. 56  
 Thyroid gland and emotion, I. 330  
 Time-beating, I. 345, II. 164, 173  
 Tobacco, II. 228  
 Tone-deafness, I. 152  
 Tongue  
   and lips, watching during speech. II. 137, 140

- Tongue  
   applied to palate, II. 183 [See also *Leigh method*.]  
   carried low with stammerers, II. 186  
   high position of recommended, II. 183 [See also *Leigh method*.]  
   low position of recommended, II. 189  
   middle position of recommended, II. 190  
   operations on, II. 223  
   under surface applied near uvula, II. 189  
   under surface applied to palate, II. 188  
 Tongue-exercises, II. 61, 68, 197  
 Tongue-fork, Itard's, II. 222  
 Tongue-nerve powders, II. 222  
 Tonsils, II. 223  
 Training the mental imagery, I. 177, 354  
 Transference of function  
   in aphasia, I. 176  
   in stammering, I. 347  
 Transitory aphasia, I. 161  
 Transitory stammering, I. 208  
 Transposing initial consonant, II. 145  
 "Traumata"  
   psychic, II. 240  
   sexual, II. 241, 253  
 Unfamiliar words recognized as difficult, I. 243  
 Unison, stammerer's fluency when speaking in, I. 200  
 Upper chest breathing, II. 14  
 Uvulas, elongated, II. 223  
 Vacillation of the will, I. 316  
 Variability  
   of imagery in the same person, I. 253  
   of the male sex, I. 210  
 Velum, exercises for the, II. 66, 67  
 Verbal amnesia, defined, I. 20 [See also *amnesia*, *aphasia*, etc.]  
 Verbal exercises, II. Ch. V.  
 Verbal image, the, I. Ch. III.  
   a complex, I. 81  
 Verbal imagery [See also *imagery*, *auditory imagery*, etc.]  
   auditory element in, I. 45  
   auditory motor, I. 52  
   distortion of, I. 258, 269  
   kinæsthetic element in, I. 45  
   "Visible speech" symbols, I. 363  
 Visile, the, I. 27  
 Visual amnesia, I. 108  
 Visual and kinæsthetic training the desideratum in treating stammering, I. 362  
 Visual centre (primary), injury to the, I. 112  
 Visual image, the, I. 4  
 Visual memory-centre, injury to the, I. 108  
 Visual verbal amnesia, I. 113  
 Visualizing colored vowels, etc., I. 351  
 Visualizing speech-movements, I. 351, II. 94  
 Vocal cords, exercises for establishing consciousness of, II. 31, 49  
 Vocal exercises, II. 40, 50  
   charts for, II. 44  
   commentary on, II. 48  
   for training the speech-organs, II. 31, 49  
 Vocalization and vowel-production, II. Ch. III.  
 Voice, continuity of, II. 53  
 Voice-accumulation, II. 56  
 Volition, I. 17  
 Voluntary speech, I. 86  
 Vowels  
   "attacked" by lowering the pitch, II. 141  
   coloration of and stammering, I. 187, 193

- difficulty with particular, I. 192  
 intensifying the, II. 124, 128  
 interpolating indefinite, II. 55  
 mispronunciation of in stam-  
 mering, I. 190  
 physiological production of, II. 91  
 Pitman's classification of, I. 193  
 prolonging, II. 116, 127  
 prolonging initial, II. 122, 128  
 short and long, I. 204  
 short, more difficult for stam-  
 merers, I. 193, 204  
 taking care of the, etc., II. 137  
 the seat of the stammerer's diffi-  
 culty, I. 183  
 Vowel-coloration  
     and stammering, I. 187, 193, 204  
     the last term in evolution, I. 232  
 Vowel-reading, II. 115, 127  
 W as oo, II. 81  
 Wach suggestionen, II. 235  
 Waist breathing, II. 15  
 Waking state, suggestions during the,  
     II. 235  
 Wave of sound, following a, II. 214  
 Weather and stammering, I. 301  
 Wetterstrand, II. 234  
 Whisper, speaking in a, II. 51  
 Whispering  
     as a respiratory exercise, II. 18  
     in stammerers, I. 185  
 Whistling, II. 215  
 Will, the, I. 18  
 "Willing game," the, I. 88  
 Wish, the "repressed," II. 240  
 "Word regulator," II. 171  
 Word synthesis, II. 98, 110  
 Word-blindness, I. 113  
     subcortical, I. 115  
 Word-deafness in the stammerer, I.  
     235  
 Word-exercises, II. 98, 110  
     charts for, II. 99  
 Words  
     defining, II. 108  
     run together, II. 145  
 Wutzer's glosso-mochlion, II. 222  
 Wyllie, I. 79  
 Wyneken's experience at the Katen-  
     kamp Institute, II. 174  
 Y as ee, II. 81  
 Yates, Dr., II. 184  
 Yates method [See *Leigh method*.]

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